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ABSTRACT

The study considers broader issues of language in relation to high intelligence in primary school children. Section 1 reviews the views of several theorists regarding the relationship of man's ability to think and to speak. Section 2 considers theories of intelligence; while Section 3 looks at types of intelligence quotient tests (including the group test and the individual scale). A fourth section addresses the nature and identification of giftedness. Also discussed are the definition of creativity, characteristics of the creative, and the encouragement of creativity. Section 5 highlights the differences between talking, reading, and writing as linguistic modes of expression. Some of the problems related to children's language and to teacher's handling of language-based activities are considered. Section 6 reviews some techniques used in programs for the gifted, and describes the writer's program which consisted of a series of "starters" from which the children could proceed to speak and write. Section 7 offers some proposals regarding possible categorizations of the high IQ children's written and oral responses. An eighth section considers some of the influential factors on linguistic achievement and scholastic success. The final section contains an overview of provisions for the gifted in the United States and in the United Kingdom, and makes recommendations based on findings. (SW)

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LANGUAGE ABILITY IN CHILDREN OF HIGH MEASURED INTELLIGENCE

Jane E. Butler-Adam

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Language Ability in Children of High Measured Intelligence

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PREFACE

The writer wishes to state that all names used in this report are fictitious to protect the identity of the children involved.

The term study group/s is used to refer to the writer's own experimental groups.

The term 'gifted' is used to refer to superior academic potential or ability unless otherwise stated.

American spelling has been retained in the quotations.

This work could not have been completed without the co-operation of a great many people. The writer wishes to express thanks to the Natal Education Department for access to its staff and schools, to the teachers who provided samples of work and filled in questionnaires, to the parents who provided much valuable information and especially to the children whose constant, lively, enthusiastic interaction inspired the writer to persevere with a complex and demanding task. The enthusiastic interest of Dr Bruce Dobie, Mrs Natalie Cunniffe and Dr Elaine Lowenberg is noted with grateful thanks.

Special thanks are also extended to my husband, John, for his careful editing of the text; and to Miss S. Naicker and Miss A. Inderjith for their patient typing of a long document.

Jane E. Butler-Adam
1982

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INTRODUCTION

THE NATURE AND SCOPE OF THIS STUDY

1. The Need for Research on the Language of Primary School Children of High Measured Intelligence

Superior linguistic facility is often noted as one of the distinguishing traits of children possessing superior measured intelligence. They are said to speak and read early and to possess advanced vocabularies for their ages. Yet little has been published about their actual written and oral output. Samples of their work are not freely available as a basis for interpretive and descriptive analysis. As a result there is a paucity of advice for teachers concerning suitable methodology and ameliorating techniques in both language skills and their expression based on a seriously considered description of such children's actual linguistic ability rather than upon a potential or projected ability.

Some material has been published in the field of language arts for the 'gifted'. Enrichment materials 1) do exist. Some offer exercises and games, others are designed to foster 'creative' reading, or writing skills. Yet others provide annotated bibliographies or suggestions designed to increase self-awareness or self expression through language-based art or drama activities.

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1. For example The Schools Council Curriculum Enrichment Packs for Gifted children aged 7 years upwards. Ogilvie E. Nene College Northampton.

A custom computer search [1] on the literature concerning the language ability of high I.Q. primary school children thus elicited fifty-one titles. Only one, however, seemed to be *directly* related to the writer's topic namely. Jensen's (1973) "Do Gifted Children Speak an Intellectual Dialect?" Letters of enquiry to individuals and institutions in both the United Kingdom and the United States likewise elicited no directly relevant material. Sources tended to refer to each other and to the above mentioned computer-assisted search.

2. The Main Areas of Concern

In spite of the notable lack of data in the writer's area of special interest much related literature is available. The study thus includes consideration of broader issues such as the relationship between language and thought, and the nature of intelligence, giftedness and intelligence quotient scores. Socio-economic influences and the language of primary school children are also areas in which data are both relevant and readily available. In the narrower area of a descriptive analysis of the written and oral language of high I.Q. primary school children, the writer's findings are merely supported by such quotations as [2] *are* available.

As the nature/nurture debate is far from resolved the writer has taken note of both sets of factors (a study of parental occupation, education *and* handling) yet is more concerned with the primary school child *as presented to the teacher* who has then to manipulate environmental

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1. Eric Clearinghouse. The Council for Exceptional Children in Reston, Virginia. U.S.A.

2. This strategy reflects the common practice of cross-relating common experimental findings. It runs the same (but no greater) risks as are found in such common practice (Lewis and Melville, 1979).

forces within a certain sphere of influence.

The writer's present concern (and in her opinion, a pressing concern) is that children who speak standard English and score well on intelligence tests nonetheless display a wide range of scholastic achievement and linguistic proficiency. These possibly result from widely differing reading, writing and talking abilities. It is the purpose of this study to describe, interpret and analyse the latter. As language activities are the major modes of interaction and also the bases for value judgments in the primary school, the writer hopes to suggest the inadvisability of hasty assessments of potential intellectual or linguistic ability based on spoken or written output. It would appear that linguistic output may be affected by a multiplicity of complex and interrelated factors. The nature of some of these factors is suggested in this study in so far as they affect some primary school children of superior measured intelligence. The aim of so doing is to assist teachers in both their understanding and teaching of such children. As Rosen and Rosen state: "We cannot care for children and not care about and cherish their most human quality ...... (*language)*" (1973, p. 42).

3. The Method of Research

In the light of her experience and study of the available literature, the writer devised a schedule of activities to be pursued by the study groups. The principal mode of research for this dissertation was empirical and qualitative 1) observation, carried out during work sessions with the children in the study groups. The study was, then,

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1. Prof. Donald Graves in the paper 'Writing in the Primary School' delivered at the Third International Conference on the Teaching of English: "English in the Eighties", held at the University of Sydney August 18-22 1980 considered writing as an outcome of a child's total personality in context - an act of total communication, defying quantification or statistical analyses.

an indepth analytical, interpretive and descriptive observation of fifty five white children (and more especially of their linguistic ability) between the ages of eight and eleven, attending primary schools in the Durban area in the province of Natal. Douglas argues persuasively for the validity of such direct experience which he terms "the most pervasive fundamental test of truth" (1976, p. 5).

Other methods used were examples of what Douglas terms the secondary test of independent evidence or testimony, "the direct experience of other people" (1976, p. 5). In this work, these took the form of interviews with parents, teachers and the children themselves, the completion of questionnaires1) and an extensive survey of related literature.

4. The Nature of the Study Groups

The study groups were numerically, but not proportionately, small being a sample of a numerically small universe - i.e. children with I.Q.s of 130+ at primary schools in the Durban area. The groups were not statistically chosen.

The nature of the sample, and especially of the individuals involved, is more central to the intricate topic of language as presented in this study than is it physical size. The writer is aware, however, of the problems of basing sweeping generalisations on such data, and has made every effort to avoid such wide ranging judgements.

Both the I.Q. scores and the stimuli devised to constitute the programme of work, serve merely as points of departure from which to begin to analyse the children's oral and written output. The writer is aware of, and makes reference in the text to, the controversy surrounding the use of I.Q. scores and to the current trend of broadening any definition of what constitutes 'giftedness'.

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1) Copies of the questionnaires are available upon request.

5. Conclusion

This study was designed to provide data in a field felt by the researcher to be of considerable importance for increased knowledge concerning the balanced linguistic development and satisfactory scholastic progress of children with superior potential at primary school level. The study thus attempts to fulfill some of the needs expressed by others - the need for "descriptive and critical accounts" of language in the primary school (Rosen and Rosen 1973), the need to view "the products of children ... as data" (Renzulli 1980), the need to observe children to see how the very able set about things (as is practised in the Surrey 'gifted' programme) but especially the need to begin to fill "the glaring gaps in our knowledge about children who are intellectually gifted" (Robinson 1976).

SECTION ONE

THE RELATIONSHIP BETWEEN LANGUAGE AND THOUGHT

1. Introduction

This section serves to draw attention to some of the ideas which have been put forward on the relationship between man's most characteristic features: his ability to think and to speak. The theories offered must, of necessity, remain incomplete for no one has yet definitely accounted for the overt nature of language let alone for its true relationship to the internalised and complex processes of thought.

The theorists themselves do not always clarify what they mean by 'language'. Another serious difficulty is that those who have gone to great lengths to devise intricate models of the relationship between language and thought have often failed to base their work on a theory of the nature of intelligence itself. Once again, the definitive work has yet to be published, and theories of the nature of intelligence abound.

Having expressed these fairly serious difficulties, the writer nonetheless feels the need for an overview of the work of experts in this field. Such an overview will provide a basis for attempting to understand how the things said and written by children are related to their potential intellectual ability (as partly indicated by an intelligence quotient test). In other words, does what children of above average intellectual ability say and are able to write mirror, precede, supercede or disguise the supposed superiority of their thought processes?

If one were to oversimplify the matter, either language is a tool of thought or language is an essential and predetermining element of thought itself. The view one takes depends not only on one's own opinion as to the relative value of dominance of speech or thought but also on the nature of the methodology used. The view also reflects an epistemological standpoint and is dependent on the general philosophy of the theorist, for example a behaviourist might use a clearly demonstrable experimental technique involving external linguistic patterns to discover how the subject *behaves* and thus also thinks.

Despite the obvious difficulties inherent in any theories concerning the relationship between language and thought and indeed in the premises upon which they are based, the writer feels that an elucidation of the similarities and differences expressed therein *is* of value in the present study, if only to prevent hasty or generalised assumptions. For example, that complexity of thought should necessarily be reflected in fluent, complex sentences and neatly ordered print. The inverse, i.e. that hesitant expression and jumbled writing reflects sloppy, inferior thought processes, is equally dangerous, and is an assumption to which some of the teachers of children in the writer's sample study groups were prone.

A child who speaks fluently and intelligently is *not* necessarily guaranteed an easy passport to the written system of language. It is to avoid such misapprehensions that the writer attempts a survey of some of the literature on a topic of a complex and tenuous nature.

2. The Views of Some Theorists

Piaget (1959, 1964) who viewed human behaviour within the context of other living things, was largely concerned with the course of normal development which, he said, followed a set pattern and which could be divided into clearly defined stages each dependent on the one before. Any variations were thus said to occur in the rate of development rather than in widely varying patterns of behaviour.

All the stages proposed by Piaget have a basis in action and result from an interactional - experimental process: that is the child's active efforts within the environment in which he finds himself. Thus even the most abstract knowledge is constructed actively in dynamic relation with the environment.

As the intellect develops so language becomes more important but the latter is never seen as a source of the former. It cannot create intelligent thought and is only one manifestation of a more general symbolic function evidenced in a system of signs.

Piaget's experiments are simple to reproduce and are invariably verified. The theory behind his work is less easy to validate. Vygotsky (1962) would probably have said that Piaget underestimated the effect of instruction on developmental rates. Anne Carter (1975) notes the removal of all gestures (i.e. action) in the use of the word 'where' by the age of twenty-four months which suggests that at that age communication has *already been transferred* from a concrete egocentric "body-language" to a highly refined abstract patterned vocal system. Piaget is thus seen to discount the mental processes required to name an object initially and also the mental endeavour required to make sense of adult speech and then reproduce it in a modified form. Oléron (1977) goes so far as to accuse Piaget for having inconsistent and unstable notions as to the role played by language in the development of cognitive processes.

Donaldson (1978) has pointed out the possibility that the children with whom Piaget worked did not understand his instructions, that improved results might have been obtained if these had been rephrased and that adults might also have been subject to similar misunderstandings.

It is difficult to pinpoint, then, the exact degree to which Piaget considers language to be reciprocally linked with thought. What is certain is that he used what subjects *said* in experimental situations to assess the proficiency of the strategies they were employing. As the latter are internalised and cannot necessarily be presumed to be completely or adequately revealed in speech one might question the exactitude of the description of the underlying functional processes thus obtained.

Chomsky (1968) argued that all children must possess an innate ability to grasp language in order to master the complexities of grammar at such an early age. Without any formal instruction they are able "to abstract syntactic generalizations ... from a fragmentary, incidental presentation of language" (Tiedt 1975, p. 51). Chomsky, like Piaget, stressed the interactive nature of language development. However, he also stressed the importance of language learnt from *other children*.

Following the rational psychologists of the seventeenth and eighteenth centuries, he proposed that the child's mind had pre-programmed ability logically to construct a grammatical system from external clues.

In Chomsky's view the link between language and thought is intimate and is clearly demonstrated in their identical structural format. This view must, of course, be seen in the light of his dominant concern to establish universal linguistic structural principles for all languages.

The Russian, Luria, was well aware of the difficulties inherent in any study of the relationsip between language and thought and thus advocated the need for a scientific method. One of the means at his disposal was the study of a pair of twins, reported in *Speech and the development of mental processes in the child* (1959). The twins' speech development had been retarded but their intelligence was normal. Like Chomsky, Luria recognised the essential social element in speech development and discovered that the mere placement of the twins amongst their peers led to startling progress towards normal speech. He recognised the cognitive aspect of language and considered, in particular, the Pavlovian concepts of abstraction and generalisation.

At the age of five years the twins were unable to master even the most elementary classifications and meaningful play was beyond them. Their utterances were related to concrete activity as a whole and their speech was synpraxic i.e. devoid of an independent grammar. They had developed a means of direct communication between themselves which obviated the need for any traditional language system. Yet after three months with other children they were capable of narrative speech and 'planning speech' i.e. speech that allowed them to see the aims of play and the means to achieve these.

Luria attributed this dramatic change to the acquisition of a language *system*. The latter allowed them to detach themselves from the immediate situation and to subordinate their activity to a verbally formulated project. They were then able to classify, abstract and generalise i.e. language had dramatically influenced the organisation of their mental life. In fact Twin A, who alone received instruction in language, began to take a leading part in speech and play activities, formulating, initiating and taking an active role in meaningful projects.

Thus Luria considered the word a decisive formative factor in the ability to remove oneself from the visual perception of the concrete to categorised behaviour and the higher psychological functions. The latter, he believed, were not innate properties as Chomsky proposed, but evolved in intercommunication with adults. The word reorganised all the child's mental processes, it formed mental activity, perfected the reflection of reality and created "new forms of attention, of memory and imagination" (Luria 1959, p. 23).

Luria stressed the transference of cultural consciousness to the child by means of the education received from adults. The latter were able to transfer deeper and more complex reflections of reality to the child by means of language than the child could ever hope to obtain from his own experience. Human consciousness was transferred by means of adult commands which regulated behaviour and organised the child's activity until he began to do this for himself. Thus Luria saw the basis of *all complex mental processes* as originating in complex forms of social life, notably the child's *verbal* communications with others. The latter allowed him to subordinate action to verbalized intentions. Piaget would have reversed the position and proposed that the child's experience of action permitted him to operate mentally but not to reason on the basis of verbal statements alone until the formal operational level at about eleven years of age.

Luria considered that he had experimentally proved the relationship of the organization of mental processes to the level of speech development. The observed features of the twins' initial speech ability were seen as the cause of a peculiar retardation of all the intellectual processes connected with speech, especially the processes of abstraction and generalization. Communication with others and the specially planned teaching of speech was said to result in the reorganisation of the child's "whole mental activity" (Luria 1959, p. 38).

Yet, indeed, even in the special circumstances of this experiment it is difficult to separate with absolute surety the possible influence of new experiences as a result of *peer group interaction* and the concomitant *development of speech* on increasingly complex mental functioning.

Bruner (1963) like Vygotsky, has provided a clearer model of how language and thought interact and intertwine at various stages in a child's development. He has suggested that man's innate ability to handle symbols enables him to master language initially and later to achieve powers of conceptualization beyond those of speech. The linguistic mode is seen as dramaticallu powerful, influencing the earlier enactive (action-cum-perception) and iconic (action-free-perception) modes. Words thus rapidly multiply the number of categories available until eventually the child's powers of organisation in thought exceed his powers of organisation in speech.

This stage has particular relevance for this study as children with superior intellectual ability may be expected to reach it well before their peers. Thus some of the children in the writer's study groups, despite their age grouping within Piaget's concrete operational stage, might indeed have possessed powers of intricate and complex thought which they were unable to match in oral or written expression.

Vygotsky's theory of the relationship between language and thought is accorded greater emphasis than the theories described above for several reasons.

Firstly, he defines clearly what he means by language and distinguishes between word meaning, oral speech, the written word and verbal thought. He then considers a relationship between these elements which reflects the complex interrelated, interactional nature of necessity inherent in any supposed connection between such multi-faceted concepts as 'language' and 'thought'.

Unlike some of the theories outlined above, Vygotsky's attempted clarification of the matter also allows for considerable variation both in individual developmental rates and in the *nature* of mutually interactive thought and verbal processes. In this regard he considers Piaget's theories at some length and presents a view perhaps better suited to the consideration of small groups of children with unusual abilities than Piaget's generalised consideration of developmental processes allows.

Vygotsky, like Chomsky, Luria and Bruner, recognises the organising role that speech plays in the construction of the higher mental processes. Despite difficulties of translation and the partial documentation of much of his experimental work, what he did convey to the world before his early death represents probably the most extensive and detailed account of the probable intricacies of the relationship between thought and language. He admits on the first page of his works edited in *Thought and Language* (1962) that psychology has never investigated the relationship systematically and in detail. This is partly because, in the past, theories ranged between complete fusion to complete separation of the entities involved and also because of inadequate methodological procedures. Vygotsky attempts a process of phenomenological reduction whereby language becomes a basic indivisible unit - *word meaning*. Here, he says, thought and speech unite in verbal thought and from here their reciprocal interaction can be traced.

A word already represents a generalisation of reality (i.e. a thought) and must be expressed semantically and phonetically (i.e. linguistically). Words are thus concept linked. Intellect, affect and language are united in a "Dynamic system of meaning". (Vygotsky 1962, p. 8).

Vygotsky admires the vast amount of clinical data obtained by Piaget but questions its theoretical basis i.e. that the main bond uniting all specific characteristics of child logic is the egocentrism of his thinking. Piaget proposes that egocentric speech becomes inner speech as the child approaches school age i.e. the child then tends to think out problems (on a concrete basis) rather than express them.

Vygotsky further questions the validity of Piaget's premises for *all* children since particular social situations are excluded in Piaget's experiments. He boldly comments: "They are not laws of mature but are historically and socially determined" (Vygotsky 1962, p. 23).

Vygotsky considers the relationship between language and thought to be much more complex than a sudden blossoming of intentionality towards meaning. It is one which undergoes many reciprocal changes where growth curves cross and recross rather than one in which development is regular and parallel. Indeed he states quite clearly that

- speech and thought have different genetic roots.
- the two functions develop along different lines, independently of each other.
- there is no clear cut and constant correlation between them.
- the close correspondence between thought and speech characteristic of man is absent in anthropoids.
- in the phylogeny of thought and speech, a prelinguistic phase in the development of thought and a pre-intellectual phase in the development of speech are clearly discernible (Vygotsky 1962, p. 41).

Vygotsky (1962) proposes an "Independence of the rudimentary intellectual reactions from speech" (p. 42) until the age of two years when speech begins to serve the intellect and thoughts begin to be spoken. The greatest discovery of this time i.e. that objects have names is thus only possible when a certain relatively high level of thought and speech development has been reached. The syntax of speech is mastered before the syntax of thought and yet a vast area of thought has no direct relation to speech. This 'reciprocal independence' can be diagrammatically represented as follows:

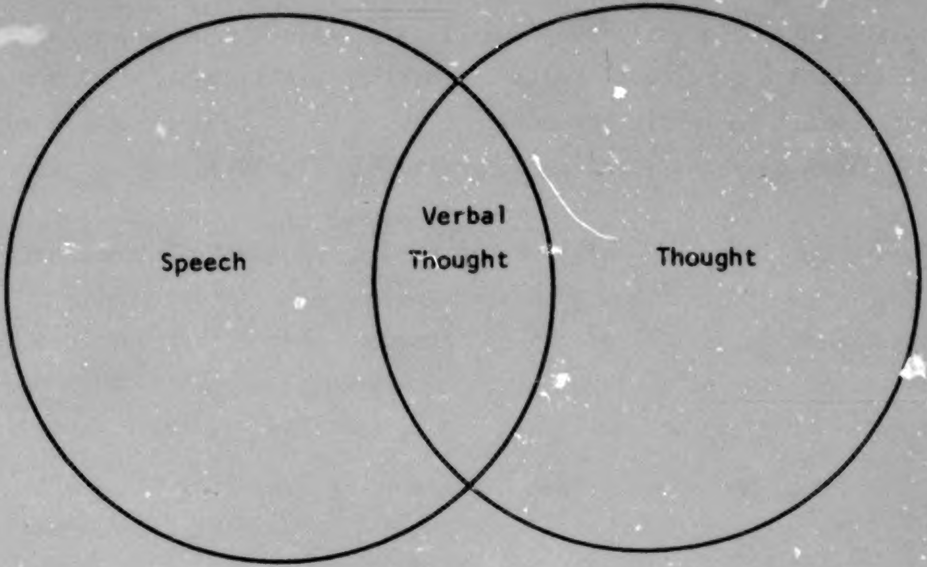

Figure 1 : The 'reciprocal independence' of speech and thought according to Vygotsky.

He concludes, on the basis of experimental work involving concept building with a variety of blocks: "That fusion of thought and speech, in adults as well as in children, is a phenomenon limited to a circumscribed area. Non-verbal thought and non-intellectual speech do not participate in this fusion and are affected only indirectly by the processes of verbal thought" (1962, p. 48).

Vygotsky explains in some detail how concepts are formed in children. He proposes that although an adult may *think* that the child understands concepts he, in fact, uses the same referents but not necessarily the *same meanings*. By using nonsensical terms in his experiments, he sought to demonstrate that the child passes through distinctive procedures in an attempt to master concepts, namely:

- associative complexes, whereby all is related to the first name visible.
- collections, according to functional differences.
- chain complexes, which expand limitlessly and inclusively (Vygotsky 1962, pp. 62-65).

The pseudo-concept, where a child categorises according to concrete, visible likeness only, links the formation of complexes with real concepts. The use of the word has an integral part to play in these developing processes and maintains a "guiding function" (Vygotsky 1962, p. 81). Vygotsky reflects Piaget's interest in developmental maturity for he stresses that drilling is of no avail and that the concept is: "A complex and genuine act of thought" (Vygotsky 1962, p. 82) which can only be accomplished when the child's mental development itself has reached the requisite level.

Vygotsky maintains that *true* concepts are only stabilised once a child has become aware of the system of *scientific* concepts. The latter then filter through to affect everyday concepts. This argument is used to clarify the difficult experienced by children in writing skills, which often lag behind their oral speech. Vygotsky discounts mechanical obstacles, attributing the difficulty to the *high degree of abstraction necessary* and to the difference between inner speech and the written word. The latter is expanded, deliberate and structured whilst inner speech is reduced and minimal. Indeed: "Communication in writing relies on the formal meanings of words and requires a much greater number of words than oral speech to convey the same idea" (Vygotsky 1962, p. 142). Written expression is addressed to someone absent who doesn't have the same ideas and must thus be fully deployed and syntactically differentiated. Inner speech thus serves as a form of draft to both written and oral speech. The process is thus both complex and dynamic: "The transformation of the predicative, idiomatic structure of inner speech into syntactically articulated speech intelligible to others" (Vygotsky 1962, p. 148). Inner speech is "thinking in pure meanings" (1962, p. 149), whilst thought itself occurs on a deeper plane to create connections, fulfil a function or to solve a problem. Vygotsky poetically compares a thought to "a cloud shedding a shower of words" (Vygotsky 1962, p. 150).

Two quotations may attempt to convey the depth and complexity of Vygotsky's own thinking :

> The relationship between thought and word is a living process; thought is born through words. A word devoid of thought is a dead thing, and a thought unembodied in words remains a shadow. The connection between them, however, is not a preformed and constant one. It emerges in the course of development and itself evolves.

and

> Words play a central part not only in the development of thought but in the historical growth of consciousness as a whole. A word is a microcosm of human consciousness.
>
> (Vygotsky 1962, p. 153)

3. Overview

Oléron (1977, p. 7) has stated that we cannot determine how language and thought are functionally related. Yet it is clear from a survey of the relevant literature that there *is* a relationship; an "interdependence of language and perception and, for that matter, between language and other mental activities" (Terwilliger 1968, p. 264). The main difficulty in attempting separate definitions of the functions and development of speech and thought lies in the inability of the mind to contemplate thought without speech or speech without thought - although the latter is much more believable.

The theories reviewed above are all concerned in general with the relationship of *organization* in speech to *organization* in thought, i.e. a relationship of patterns. Each theorist views the latter as having an origin - yet the exact nature of this genesis is elusive. Thus Piaget and Bruner speak of the basis of all cognitive processes as existing in action yet fail to delve further. Likewise Luria considers the basis to be 'intersocial communication'. Chomsky appears most aware of this difficulty and thus describes the relationship of language and thought patterns as merely 'innate'. Vygotsky is so convinced of the intimate relationship between language and thought that he refuses to proceed beyond the interrelated phenomenon of 'verbal thought' - a mutually implicated reality which springs from different roots, and in which the separate curves of development cross and interact. His theory, if not definitive, should at least warn against simplistic generalizations of a clear-cut and easily dismissed link between the two processes.

In the end one is left to concur with Britton (1970, p. 207) that, in this matter: "More is to be discovered than is yet known". Indeed one might do well to return to Sapir's definition of 1921 (in Wilkinson 1971, p. 14): "Language is a purely human and non-instructive method of communicating ideas, emotions and desires, by means of a system of voluntarily produced symbols". The influence of thought is inherent in the words 'ideas' and 'voluntarily produced' yet its exact role remains elusive.

Despite the difficulty of exact definition mentioned so often above, the subject of the relationship between language and thought remains a fascinating one. The writer hopes that the present study in its specific concern for the language ability of children with high measured intelligence may serve to provide some glimpses of active thought as it pervades oral and written expression.

The following section provides more detailed information concerning the nature of intelligence, its measurement and especially some details about those children who achieve notably superior scores on intelligence tests and who may thus be designated 'gifted'.

The term 'gifted' has in ordinary parlance as unfortunate ring of superiority and has been avoided by some because of its emotive connotations. The fact remains that a group of children scoring remarkably well on intelligence or other tests and pursuits *does* exist and needs some accepted nomenclature. The following section attempts a clearer and more precise definition of what 'giftedness' entails.

SECTION TWO

THE NATURE OF INTELLIGENCE, GIFTEDNESS AND THE I.Q. SCORE

1. Introduction

The study of superior intellectual potential is largely based on studies of the nature of intelligence rather than upon a field more narrowly defined by 'brightness'. This is true even of such monumental and pioneering works as those of Terman. "The reason is probably that in approaching the bright, most people have focussed on testing and on social service, leaving insufficient motive or support for considering brightness from a strictly theoretical perspective" (Laycock 1979, p. 63). Thus there exists no 'model' of the nature of superior intellectual ability - only definitions of multiple and diverse terms such as, 'talent', 'potential', 'ability', 'creativity' and the intelligence quotient score itself.

2. Theories of Intelligence

As there is no 'model of superior intellectual potential' as such, it is necessary to consider general theories of the nature and development of intelligence with special reference to the manner in which exceptional intelligence might be considered to differ from the model either in form or in developmental rate. The concept of intelligence is constantly expanding. In general, theories are described in terms of a progressive unfolding of those intellectual abilities which are seen to establish a unitary structure (Binet, Spearmon, Terman, Burt, Vernon, Hebb, Eschsler) or to constitute a composite of abilities (Thorndike, Thurstone, Guilford, Cattell).

In the light of the above groupings the child who demonstrates superior intellectual ability is thought to possess either greater quantities of the general factor 'g', or a particular combination of subsidiary factors. These then constitute a total superiority of intellect and thus may warrant special designation such as 'gifted'.

CA	GR	Level	*Concept Formation Stages (Piaget)*	*Ego Formation Stages (Erikson)*	*Bloom's Taxonomy*	*Guilford's Products (Capable of Handling)*	
5 6 7 8	K 1 2 3	I	*Intuitive Thought* Understands ends-means but has not yet formed concepts of class and relations.	*Initiative* Play, self-importance, fantasy, creativity. (May feel guilty)	*Knowledge*	*Units* (Thing)	*Classes* (Set of units)
9 10 11 12	4 5 6 7	II	*Concrete Operations* Concepts of classes, relations, numbers, space, time and an ordered world in which everything has its place.	*Industry* Manipulation building, basic skills, and peer group. (Inferiority)	*Comprehension* *Application*	*Relations* (Analogies)	*Systems* (Organized combinations of parts)
13 14 15 16 17 18	8 9 10 11 12 13	III	*Propositional or Formal Operations* Formation and evaluation of theories and hypotheses. Able to function at Bruner's level of concept formation. Can think and reason. Contingency distinct from fact.	*Identity* "Who am I" - Self concept development. (Diffusion)	*Analysis, Synthesis, Evaluation*	*Transformation* (Consequences, contingencies, outcomes, etc.)	*Implication* (Change, redefinition, or reorganization)
19	14	IV	(No new level is reached, but continued reinforcement of III noted. Some young adults may cease concept formation.)	*Intimacy* I -Thou relation with people. I-it relation with work.	(Same)		(Same)
Main Variable		V	(Same)		Bloom and Guilford do not describe these as developmental as here suggested. We believe that "products" are more affected than "contents" or "operations"		

Auxiliary Variables - 1. Mental ability (acts to decrease age at which Bloom's and Guilford's aspects are realized)
2. Personal maladjustment (acts to increase age at which Erikson and Piaget stages operate)
3. Socio-economic status (high) acts like 1; SES (low) acts like 2.

Implications - The complexity of teaching in grades 6 and up should be greater than K through 2 and should involve Bloom's concept of analysis, synthesis and evaluation as well as Piaget's formation stages.

Figure 2: Developmental Time Track. (Gowan and Demos 1964, p. 29).

Almost all theories of the nature of intelligence consider it a factor of time - a development, through time, of intellectual ability rather than a fixed, stable and set quality. Gowan and Demos (1964) have devised a developmental time track which indicates the pace of development to the most complex levels of cognitive ability through a child's school life according to various proponents of cognitive development theories (see figure 2).

As may be seen in figure 2, Piaget is chiefly concerned with the child's increasing ability to cope with the environment. He does not deny the possibility of optimal conditions for unusual intellectual achievement resulting from "a quick and responsive nervous system reacting and growing with richly varied experiences" (as quoted in Laycock 1979, p. 153). Laycock (1979, p. 12) states quite categorically that 'gifted children' reach the level of formal operations before the age of twelve and discounts the universality of Piaget's theories. He cites (1979, p. 154) the finding of Berry and Dasen (1974) that non-literate cultures do not employ formal operations, and that of Wiemark (1975) which proposes that in industrial societies about forty percent of adolescents fail to achieve such operations.

Bruner (1963) is most concerned with the way in which learning occurs as a way of *generalizing* about old and new tasks i.e. how assimilation and accommodation of data are effected. He is not concerned with specifics but with the manner in which transference resulting from perceived similarities is possible. Thus we organise experience by means of concepts which help us simplify experience. Concepts are further defined by particular attributes such as smell or shape. Certain strategies (common ways in which a child learns) i.e.: "Purposive, sequential, intelligent behaviour by which the learner, through discernment of attributes, discovers concepts relating various bits of experimental data" (as cited in Gowan and Demos 1964, p. 24) have to be actively pursued. If Bruner's theory were to be used as a basic model for superior cognitive behaviour expressed in superior cognitive ability one might suppose that superior purposive, intelligent behaviour might enhance the discernment of attributes and thus the subsequent formation of concepts. Concept formation or logical categorisation is closely tied to Piaget's level of formal operations and to thinking generally labelled as abstract i.e. removed from concrete observations or experiences. As concepts are expressed through language the study of linguistic ability, and particularly of abstract concepts expressed though language, is a particularly suitable means for determining superior or advanced performance or potential1).

Bloom's Taxonomy of Educational objectives (1956) is particularly relevant to this study as the stimuli for writing and talking in the programme described in Section Six are loosely based on the abilities he describes. Although not developmental by nature, these abilities exhibit a certain ascendency in complexity.

Bloom attempted a hierarchical structuring of the meanings of 'to know' and isolated six abilities; knowledge, comprehension, application, synthesis, and evaluation. Knowledge requires the recall of specifics; comprehension, the lowest level of understanding, might require translation, interpretation, that is the recording, explanation or summarization of material, or extrapolation i.e. the extension of trends beyond given data. Application implies the applied or predictive ability of abstractions or general principles to particular situations. Analysis of elements, relationships or organisational principles requires a break down to elements whilst synthesis produces a whole from parts, whether the latter be a unique communication, an abstract relationship or a set of operations. Finally evaluation implies judgement, in terms of internal or external evidence, of the value of materials or methods.

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1) The study of the study groups' written and oral output will serve as some indication of the progress they have made towards 'adult', complex and abstract concept formation.

3. Abstract Thought

The term 'abstract thought' is commonly used without definition or clarification as if it referred easily and comprehensively to a single level of thought recognisable to all. But as the theories of the nature and development of intelligence described above differ one from another, so the definition and meaning of 'abstract thought' varies from one proponent to the other.

Given the great variety of definitions and examples of what may constitute abstract thought it may be easier to refer instead to the degree to which thought is *removed* from concrete reality - what Donaldson (1978) has referred to as 'disembedded thinking' (p. 76). This type of thinking is often considered 'difficult' even by adults and for many is not included in their normal range of cognitive activities. This type of advanced abstraction must be clearly distinguished from the notion of concepts abstract by nature such as love and hate.

Most writers concerned with children of superior potential would agree with Martinson (1968) that these children are capable of dealing with "abstract knowledge and symbols in the primary grades" (p. 17) and that curricula designed for them should stress abstract concepts in order, as Gallagher puts it, to search out "the structure of the subject" (1975, p. 14). He goes so far as to state that "the one factor that youngsters labelled 'gifted' have in common is the ability to absorb abstract concepts, to organise them more effectively and apply them more appropriately than does the average youngster".

Yet Bridges (1975, pp. 32-33) warns of the possible neglect of a group of children with superior potential who are yet more "responsive and resourceful when given concrete tasks and problems from everyday life" (1975, p. 25). Indeed, during the Brentwood experiment Bridges discovered that some of these children still required: "A concrete introduction to a topic before they venture to abstract ground" (1969, p. 92). Yet he noted, too, a tendency to avoid and mistrust practical work unless its relationship to more abstract theory was clearly indicated.

However 'abstract thought' or 'the higher cognitive abilities' are defined, it is by means of their attempted measurement by tests designed to describe intelligence quotients that most children of superior intellectual potential are identified. It is thus necessary to consider both the general definition and nature of such tests as well as the nature of those items designed more specifically to measure linguistic proficiency.

SECTION THREE

INTELLIGENCE QUOTIENT TESTS

1. Introduction

It will be apparent that the diversity of opinion previously expressed is largely the result of the difficulty of any endeavour which seeks to begin to define the intricate complexity of the mind. To suppose that a single test score could ever sum up once and for all the nature and quantity of an individual's intelligence is thus a rash assumption. To ignore such a test is, however, to negate the usefulness of the means available as a guide to mental development accelerated beyond chronological age. The score measures a level of development of the intellect but cannot be said to equate in its items the true nature of the various abilities it purports to measure. It is supposed that children of different intellectual abilities will progress to varying levels of cognitively complex tasks at varying speeds. It is presumed as Laycock (1979, p. 70) puts it "that the bright child can reason more powerfully than the average child: more completely, more accurately, and more spontaneously". What *cannot* be presumed is that the score is a synonym for intelligence or that it will remain fixed despite temporal variations or the administration of different tests, which may seek to discover general brightness (i.e. from a unitary point of view) or facility in specific factors (i.e. from a composite point of view). Naturally a test score is meaningful only as it refers to a specific test and is as reliable as the latter. Novel research, originally entitled 'the string measure' has been done by Dr Elaine Hendrickson at London University's Institute of Psychiatry. Activity in the brain in reaction to light and sound stimuli is electronically measured and then computed to provide a culture free measure correlating well with scores on traditional methods.

McCall, *et al* (1973) note fluctuations in scores on standardised tests in children aged between three and twelve years and thus warn against over confidence in the stability of performance as recorded in a single score.

2. The Group Test

The group test, administered to several children at one time, relies heavily, of necessity, on reading ability as children are required to manage the response to written questions on their own. Thus the group test may correlate fairly well with measures of scholastic achievement in the largely language dominated primary school situation.

Clearly a group test aimed to suit many children of average intellectual ability is, as Gowan and Demos (1964) point out, likely to have a relatively low ceiling and thus to reflect large deviations in response to minimal error. Thus, as Dunn points, the group test tends to underrefer. In fact "group test I.Q.'s were about 34 points lower on the average" (1973, p. 198) than individual scores. This is substantiated in the present study groups' scores. Dunn also cites four serious limitations inherent in any group test namely: limited range and low ceiling, the difficulty of effective pupil motivation and dependency on reading proficiency (1973, p. 199). For these reasons they are generally considered unsuitable for use at primary school level. The Individual Intelligence test provides a more reliable, if still incomplete, summary of intellectual potential.

3. The Individual Scale

An individual I.Q. test relies less heavily on a pupil's reading ability and permits a more comprehensive assessment of a child's general and specialised intellectual abilities. It also allows for the definition of possible negative influencing factors or specific disabilities which affect the total score.

The difference in the nature of the group and individual tests will thus result in varying categorisations of the scores to constitute 'giftedness' or 'very superior ability'. Differences of opinion concerning the so-called 'cut-off-point' will be discussed more fully as part of the consideration of a definition of 'Giftedness'.

In any event almost all authorities agree that no I.Q. score can serve as sufficient indication of superior intellectual potential. As is noted by Laycock (1979, p. 39 and 40) Terman used a variety of sources to supply additional information about his "termites"[1) - parents' and teachers' questionnaires, standardized test results and records of school achievement and reading habits. The present writer has similarly used additional data to support the initial point of departure i.e. a score of 130+ on either the N.S.A.I.S. or the N.S.A.G.T. (New South African Individual Score and the New South African Group Test).

One of the writer's main concerns has been to investigate the nature of the written and oral linguistic output of a group of children who have scored well on the above mentioned tests. In order to be able to make any meaningful comments it has been necessary to consider the nature of the verbal sections of the tests[2).

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1. The name he affectionately used for those in his study.
2. It is interesting to note that in Belgium total I.Q. scores are now ignored and the verbal/non verbal scores are seen as significant in themselves (Data supplied by Professor Pyck at the Conference on the Education of the Exceptional Child, Durban, August 1981).

The N.S.A.I.S. contains much that could be designated as requiring verbal proficiency as most of the tests are asked orally and require spoken answers:

Test one tests vocabulary but requires considerable aptitude for fine visual perception. Answers are probably insufficiently graded for the younger children as the final three answers in each case depict abstract states couched in advanced vocabulary such as 'conviviality'.

Test two, an oral comprehension test, tends to reflect a child's level of social consciousness rather than an ability to comprehend meaning.

Test three for verbal reasoning requires a carefully graded set of answers - the more abstract the concept, the higher the score i.e.

- 3 points for 'a good generalisation', 'an abstract concept'.
- 2 for a 'functional definition' or 'less appropriate generalisation'.
- 1 for a 'concrete response'.
- 0 for 'subjective evaluation'.

The problems set in test four require verbal reasoning and rise sharply in difficulty after item four. The memory test, test five, may be adversely affected by nervous tension, poor hearing, speech defects or poor concentration.

A verbal score on the N.S.A.I.S. does not therefore necessarily reflect a child's ability to read, write or speak fluently, correctly and with ease. It rather reflects certain social values, a certain proficiency in vocabulary, perception and memory but especially the ability to generalize and abstract. This is to be expected in an intelligence test of a largely deductive nature but then requires an extremely cautious approach in any attempt to equate a verbal I.Q. score (or a total score) with the actual verbal proficiency witnessed in everyday scholastic or other situations.

Any interpretation of the meaning of such scores must also of necessity be coloured by one's own interpretation of the nature of the complex relationship between language and thought as discussed above. A certain caution in the interpretation of scores is necessary in cases where children have received considerably deprived cultural (and thus, probably also linguistic) input.

Both the N.S.A.I.S. and the N.S.A.G.T. tend to require close-ended convergent responses and thus may not cater for the creative child with a superior intellect. In fact all children of superior ability may possess "more different associations to any two stimuli than average children do" (Osler and Trautman 1961, pp. 9 - 13) and thus may not reveal their true potential in such tests. This is equally true of the child who is deliberate and thoughtful and who may be adversely affected by the time limit imposed in some tests. A pensive attitude may be mistaken for a lack of knowledge. In fact Bridges (1969) makes special note "that the minds of able children work on, even when they gave no sign of application to the problem. Less able children, when appearing to have given up the problem have usually stopped working on it altogether, and seldom return to it". (p. 91). Other children who are 'late maturers' may be classed as mediocre by tests which may, in any case, be insufficiently graded.

The N.S.A.G.T. is more evenly graded as it covers, in its Junior Form, a narrower age range. It relies heavily on reading ability and must reflect this proficiency to a large extent in its scores. The vocabulary test does indeed seem to reflect vocabulary power despite some obscure items. Test six requires vocabulary skills and logic whilst test four requires interpretation of written language and mathematical problems. The test as a whole is clearly a close approximation to the skills usually demanded in the ordinary classroom.

It seems then that both tests have their weaknesses as representative of complex intellectual ability and of language proficiency. They remain, however, possible indicators of future potential and achievement.

4. The I.Q. Scores of the Writer's Study Groups

Having considered the nature of the I.Q. tests in some detail especially as regards their 'verbal' components it is now necessary to describe the scores obtained in these tests by the children in the study groups.

The study groups designated A, B and C consisted of 24, 16 and 15 children respectively aged between eight and eleven years on 1.1.1980. The main study group, Group A, was obtained by means of parental permission amongst members of the Natal Association for Gifted Children, an organisation not-for-gain (under the direction of a voluntary committee of professional educators) which arranges enrich=ment courses in a wide variety of subjects during the school holidays and also provides professional advice to parents and teachers.

Group B was selected in response to a request to local government primary schools for lists of children with high scores on the N.S.A.G.T. These children were not members of the N.A.G.C.

The children in Groups A and B were not randomly selected but were accepted if they scored 130+ on either the N.S.A.G.T. or the N.S.A.I.S. and were willing to participate in a programme of work. For Group A this entailed fifteen two hour sessions on Saturday mornings whilst for Group B the course lasted for five days during the October holidays - once again in two hour sessions.

Group C, a heterogeneous class at standard three (year five) level in a government school, followed the same programme as did Group B but did so in normal school hours. Group C cannot be said to serve as a control group in the true sense of the word being from a broader socio-economic base1) and neither randomly selected nor matched. The children in this group served rather as some indication of possible differences in reaction to the stimuli provided in the programme.

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1. The writer is aware that this may be a contributory factor both in respect of the nature and quality of the children's responses.

Whilst Groups B and C are fairly evenly distributed between the sexes, Group A consists mainly of boys[1]. All except four of the children attend Government primary schools and are thus comparable in that regard.

The groups are also close in average age. Group C shows a slightly above average total N.S.A.G.T. score whilst Group B children show a high average total of 138.

Group A deserves, perhaps, more detailed description as the children remained with the writer over a six month period, completed more tests and were generally the subjects of more detailed analysis.

	N.S.A.G.T.		N.S.A.I.S.		N.S.A.G.T. (school)
Verbal Scores	125		135		129
Difference		10		6	
Non-Verbal Scores	131		135		130
Difference		4		5	
Total Scores	129		138		131
Difference		9		7	

Figure 3 : Group A. Comparison of Mean I.Q. Scores

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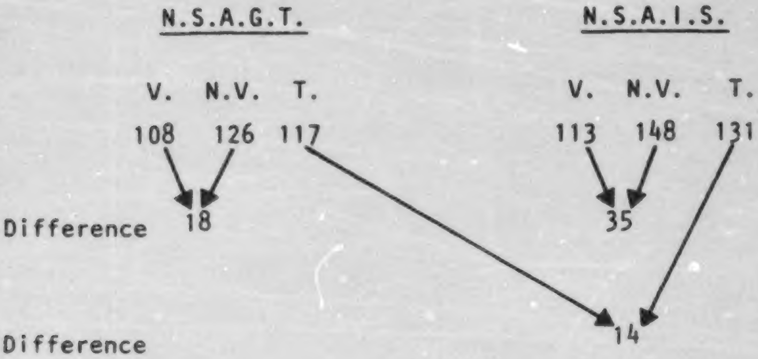
[1] The writer is aware of the possible negative bias in some of the language skills (especially the mechanics of writing) which the imbalance in the sexes may have produced. Observation of the group suggests that it did not play an important role.

In all sections the Group Tests present lower mean scores than the Individual Scale does, tending to substantiate Dunn's (1973) hypothesis that group tests tend to underrefer. On an average this underreferral appears less significant than is clear in individual cases where the difference is so great that a child could be classed as of average intelligence in the Group Test whilst obtaining a superior score in the Individual Test. This is likely to occur in those children who have difficulty in reading or concentrating and tend to display significantly higher non-verbal scores; this is the case, for example, for Patrick.

Patrick



That all the children in groups A and B have provided indications that they *might* display superior potential in some areas is clear. The extent to which they *display* superior achievement both generally and in the language skills will be considered in detail throughout this work. The nature of and justification for some special label such as 'giftedness' or 'superior ability' for those who have 'superior potential' will be discussed under the next heading.

SECTION FOUR

THE NATURE AND IDENTIFICATION OF GIFTEDNESS

1. Introduction

The writer sympathizes with Torrance's view, made explicit in his foreword to Gowan and Demos' work (1964), that no matter how many books one reads on the subject of 'giftedness', one is left with a feeling of dissatisfaction largely as a result of the oversimplified and generalised view often presented. If, as has been suggested earlier, the notions of intelligence, language, thought and their relationship are complex then one must probably accept a complex view of giftedness too. Acceptance of this implies, of necessity, an attempt to begin developing strategies, methods and materials which have built into then an acceptance of this complexity" (Gowan and Demos 1964, p. viii). As Torrance points out: "A child might respond quite creatively to one task and barely respond to another (Gowan and Demos 1964, p. ix).

Indeed the present work serves to highlight *differences* in oral and written response to open stimuli by children of similar intellectual potential. If children of superior potential are not to conceal their ability it must be expected that special facilities and stimuli will evoke widely differing responses. The present work may serve to suggest some of these.

As a further preliminary comment it must be noted that, besides a necessary complexity in any apt definition, a further cultural and temporal dimension must be included. What is defined as 'giftedness' always includes those abilities valued and sanctioned by a particular community at a given time. The gifted primitive man was the best warrior or hunter. Present definitions reflect the age of: "Television, nuclear reactors, and space probes" (Gallagher 1975, p. 1) in their concern for superior mathematical, expressive and science-related abilities. If complexity is accepted as a basis, other more inclusive definitions may have to be considered.

2. A Brief History of the Gifted Movement

As early as 1872 Francis Galton in his work called *Hereditary Genius* laid the foundations for a "scientific pursuit of the subject of ability in man" (Gowan and Demos 1964, p. 9). At the beginning of the twentieth century Binet and Simon began to define the nature of tasks undertaken at specific ages and coined the notion of mental age. Tests devised to ascertain retarded ability were to become a blueprint for later tests of intelligence. Terman, designated 'The father of the Gifted Child Movement', revised the Binet tests in order to adapt them to the American child. Thus the Stanford-Binet individual intelligence test was devised and is noted by Gowan and Demos (1964, p. 10) to be "one of the earliest and best in existence". Terman also coined the term "Intelligence Quotient" to measure "a ratio between rate of mental growth and chronological age" (Gowan and Demos 1964, p. 10).

One of the first books on the subject was Whipple, Henry, Hannel and Coy's work *Classes for Gifted Children* (1919). Hollingworth's study (1926) preceded a dearth of concern in the 1930's to be reviewed in 1945 in response to a concern about social waste and the effective use of talent and manpower. In America, Public Law 95 - 561 now "Embraces the broad concept of 'gifted' and includes the areas of general intellectual ability, specific academic aptitude, creative or productive thinking, leadership, and the visual and performing arts". A brief survey of attitudes to and facilities for the gifted in other countries will be contrasted to those in the Republic of South Africa in latter sections.

3. Identification Procedures

3.1 I.Q. Scores

From the initial use of an I.Q. score as sole means of identification has grown an increasingly wide spectrum of identification procedures in an attempt to include as many potential contributors to society in as many fields as possible. Thus identification has moved beyond the narrow range of intelligence measured in an I.Q. test. Yet generally in the identification of superior potential the group test score remains the initial screening mechanism and the individual test: "The best single means we have at present for measuring cognitive abilities. This is especially true at the elementary school level" (Dunn 1973, p. 206 and 207).

The cut-off point within the I.Q. scale used to demarcate superior ability varies both according to the test used and to the interpretation. Terman suggested 140, Gowan and Demos (1964) similarly designate 115 as academically talented (16% of the population); 125 as superior (5% of the population); 140 as gifted (0,6% of the population) and 160 as highly gifted (0,007% of the population), whilst others, Kerry for example, suggest 130+.

Gowan and Demos (1964, p. 33) speak of the able child as one: "Whose rate of development with respect to time on some variable of social significance is significantly larger than that of the general population of children".

Significant differences at the level of 2 standard deviations upward from the mean are said to identify the top two percent of the general population. Most obvious is the difference in intellectual aspects but advantages in the personality sphere, developmental tasks and physical growth may also be noticed.

Those who adhere to a view of intelligence as a unitary factor would consider that the total impression the child makes can be identified with a certain level or percentile of ability (as with Binet) or in a score like the I.Q. (as with Terman) whilst those who adhere to a multiple factor theory would seek to quantify the factor involved. A Piagetian approach would be more concerned with the "increasingly sophisticated manifestations of a child's growing ability to cope with the environment" (Laycock 1979, p. 75).

Despite the move towards a broader spectrum of abilities defined as indicative of superior cognitive ability we are still far from abandoning standing on some broad test of intelligence as a significant guide. In South Africa both the White community and the Education Departments sanction the I.Q. as a general guide to intellectual potential in the regular administration of the N.S.A.G.T. to all children.

3.2 Multiple Criteria

A multiple criteria approach to the identification of superior potential allows for the inclusion within the 'gifted' category of those children with specific talents or creative abilities and for those who do not score well on group tests because of reading or other disabilities. Indeed as Laycock (1979, p. 38) points out many children will possess all-round abilities, specific talents and creative imaginations and will thus need an in-depth investigation if their full potential is to be discovered.

Multiple criteria would thus include teacher nomination through observation, parental information, records of previous accomplishments, group achievement and creativity tests, tests of special aptitudes and talents and self-selection (i.e. volunteers for special classes) as well as the usual group and individual I.Q. scores. The above data require careful interpretation and should be accompanied by a case study detailing special interests, behavioural patterns and home background. This process is obviously time-consuming yet as Dunn (1973, p. 206) points out: "Gifted children tend to be complex, and identification of their many capabilities is an important responsibility". In order to carry out this responsibility further measures such as sociometric indices, personality measurement and motivational assessment may be required.

The use of multiple criteria not only enlarges the size of the population designated as 'gifted' but should also result "in more adequate planning to meet the individual's needs" (Renzulli 1975, p.19).

Renzulli (1975, p. 16) provides an example of the kind of definition which results from the use of multiple criteria, namely:

> Giftedness may be defined as a superior general intellectual potential and ability (approximate I.Q. 120+); a high functional ability to achieve in various academic areas commensurate with general intellectual ability; a high-order talent in such special areas as art, music, mechanical ability, foreign languages, science, mathematics, dramatics, social leadership and creative writing; and a creative ability to develop a novel event in the environment. This definition probably includes about 15 to 20 per cent of the school potential.

Thus it is seen that the broader the definition, the greater the percentage of those labelled 'gifted' becomes.

With the introduction of special classes for the gifted, especially in America, has come a greater concern for gifted *performance* or *behaviour* in specific general areas. Thus Renzulli J.S. and Smith, L.H.[1] (unpublished article) have devised a model as an aid to the admission of children to special programmes. Above average ability is seen as an insufficient recommendation. Task commitment and creativity are additional requirements and must be brought to bear on a particular topic at a particular time to warrant supple= mentary services. This method of identification would thus exclude a large group of underachieving 'gifted' children who lack task commitment but who yet would seem to require supplementary services.

Of the multiple criteria described above, the most commonly used is probably teacher nomination. Teachers consider children to possess superior cognitive potential on the basis of generally observable characteristics such as those detailed below.

4. General Characteristics

Despite a lack of experience and maturity, children who possess superior intellectual potential can be broadly said to be able to grasp concepts and principles quickly (almost 'intuitively' according to Bridges 1969), remember them well and describe them accurately in an independent manner which may obviate the need for formal teaching. They tend to perform well in verbal areas, read widely, have many interests and make numerous collections (Witty 1951).

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[1] Obtained through personal contact with the authors.

> Terman goes so far as to propose that the deviation of the gifted subjects from the generality is in the upward direction for nearly all traits. There is no law of compensation where the intellectual superiority of the gifted tends to be offset by inferiorities along non-intellectual lines.
>
> (in Martinson 1968, p. 23 and 24)

Lists to serve as general guides to the identification of those with superior potential abound. Some, as indicated in the following comprehensive list, may serve as fairly detailed guides to teachers. Others often published in popular magazines and through other media may highlight general physical characteristics - bright eyes, above average muscular energy, superior health - which may prove of little use (or may even be misleading) to a teacher faced with a heterogeneous group.

1. Display of extraordinary initiative: singleness of purpose.
2. Intense curiosity, sometimes in only one direction.
3. Day-dreaming through boredom: possibly idle and can't be bothered with mundane tasks.
4. Divergent, or even delinquent behaviour: independent.
5. Highly imaginative forms of expression.
6. Exasperation in the face of constraint.
7. Contempt for adults of less ability: supercilious.
8. Above average dependability.
9. Ability to rationalize about lack of achievement.
10. Highly developed sense of humour.
11. Lively and stimulating conversation: not keen on writing everything down always.

12. Ability to be absorbed in work for long periods.
13. Suggestion of associated musical ability.
14. Exceptional speed of thought.
15. Exceptional depth of thought which shows itself, *inter alia*, in:
    a) their power to organize material
    b) ability to see the need for many different words to express shades of meaning
    c) their power to make and understand analysis
    d) their power to use images
    e) their capacity for adopting methods for unusual purposes
    f) attention to truthful detail.
16. Finding no need to labour the practical approach; jumping to the abstract.
17. Finding it necessary to listen to only a very short part of the explanation given; will withdraw if compelled to listen further.
18. Interests - sometimes may seem unhealthy or precocious.
19. Questions - may be tiresome and difficult to answer: also a lot of 'might' and 'maybe' questions.
20. Bossy or cocky attitude - means of defence because they feel inferior in (say) games or handwork.
21. Fear of failure - doesn't like to be proved wrong or inadequate.
22. Dissatisfaction with own efforts and contempt of approval for work of standards which they realize are very ordinary.
23. Perfectionism; mental speed faster than physical capabilities permit in action.
24. Impatience - sometimes difficult to control - intolerant, pernickity.
25. Less conformity - does not always do well; will opt out.
26. Uneasy relationships with other children sometimes.
27. Sensitivity and highly strung behaviour.

28. Acute awareness of verbal puns.
29. General preference for sharing ideas with older children.
30. A tendency to direct others in play and project situations.
31. Alertness, often too observant for comfort.
32. Good memory, frequently, but not always for 'facts' - for the way things work or are related, often forgetful of 'minor' matters.
33. Keeness at collecting ('rubbish' sometimes).
34. Humility about their achievements; not necessarily anxious to shine.
35. Indication, sometimes, to be self-centred or aggressive; attention seeking.
36. Lack of enthusiasm about group activities or group games.
37. Appearing not to need a massive amount of sleep.
38. High achievement in some line(s) or other.

Ogilvie (1973, pp. 63 and 64).

5. Special Talents

In contrast to the broad *capacity to develop* particular interests and skills described above, specific talents and skills which have already been cultivated are now receiving increasing attention, notably at Johns Hopkins University since 1971 under the title of' The Study for Mathematically Precocious Youth'. The students usually score well on general intelligence tests but advanced college tests need to be administered to determine mathematical precocity.

"The students were found to be mainly creative, socially mature and achievement oriented. Two of their traits seem to work together; verbal skills and a desire to learn mathematics" (Keating 1974 as cited in Laycock 1979, p. 53). Most of these pupils had learned much through self instruction and intuitive problem-solving backed by a good verbal base and discipline to keep at a task without formal direction (Laycock 1979, p. 53).

A parallel strategy has now been initiated to locate and help children with demonstrated verbal skills. These children were found to be very interested either in creative writing or in the social sciences. The boys were found to be "analytic, theoretical, pragmatic, and mildly withdrawn" whilst the girls were "more imaginative, intuitive, and socially inclined" (Laycock 1979, p. 53).

6. Creativity

Creativity has probably become the most analysed component of intelligence during the mid twentieth century thanks to the interest of investigators such as Guilford, Torrance, Getzels and Jackson, Gallagher, Wallach and Kogan. The relationship of special and creative aptitudes and abilities to general intellectual ability is still being explored. Just as "no single definition or easy explanation of creativity has yet emerged" (Laycock 1979, p. 79) so there is no infallible explana-ation of the relationship between creativity and intelligence. Although it can probably be assumed that "creativity divorced from guiding and underlying intelligence would be worthless" (Laycock 1979, p. 80), the degree to which one presupposes the other has not been conclusively established.

Gallagher (1975) considers that general intelligence is what makes creativity meaningful. Wallach and Kogan (1965) were able to establish distinctive characteristics for each sphere, yet these were not mutually exclusive. They then combined supposed measures of intelligence and creativity in order to establish likely behaviour patterns. Thus high creativity, high intelligence children were said to be able to exercise both control and freedom being capable of both adult-like and child-like behaviour. High creativity, low intelligence combinations would, according to the writers, tend to produce children in conflict with themselves and the school thus causing feelings of inferiority and inadequacy. A stress-free environment is required to achieve cognitively. (Many would now dispute the likelihood of high creative powers existing in conjunction with low intelligence). Low creativity, high intelligence children according to Wallach and Kogan tend to be addicted to school achievement, striving for academic excellence in order to avoid the pain of failure.

Thus whilst accepting a probable distinction between superior intelligence and creative powers it is obvious that these need not be completely separate or mutually exclusive and may overlap in many children. Probably a significant degree of intelligence is required for truly creative production, but superior intelligence alone is unlikely to ensure creativity. As the evidence is incomplete and contradictory the writer would once again caution against *hasty* generalisations concerning the creative or intellectual merit of children's written or oral expression.

6.1 A case in point

The following case study might serve to indicate a need for caution - an avoidance of snap judgments - as to a child's relative creativity.

Roger in Group C of the writer's study attended the full enrichment programme upon the recommendation of a psychologist impressed by his verbal precocity 1).

1.

N.S.A.G.T.			N.S.A.I.S.		
V.	N.V.	T.	V.	N.V.	T.
111	117	114	139	117	126

Age - 8 years as at 1.1.1980.

A glance at his written expression might suggest a child of "below average intelligence" who experiences difficulty in writing, spelling and spatial awareness. He also exhibits considerable inconsistency.

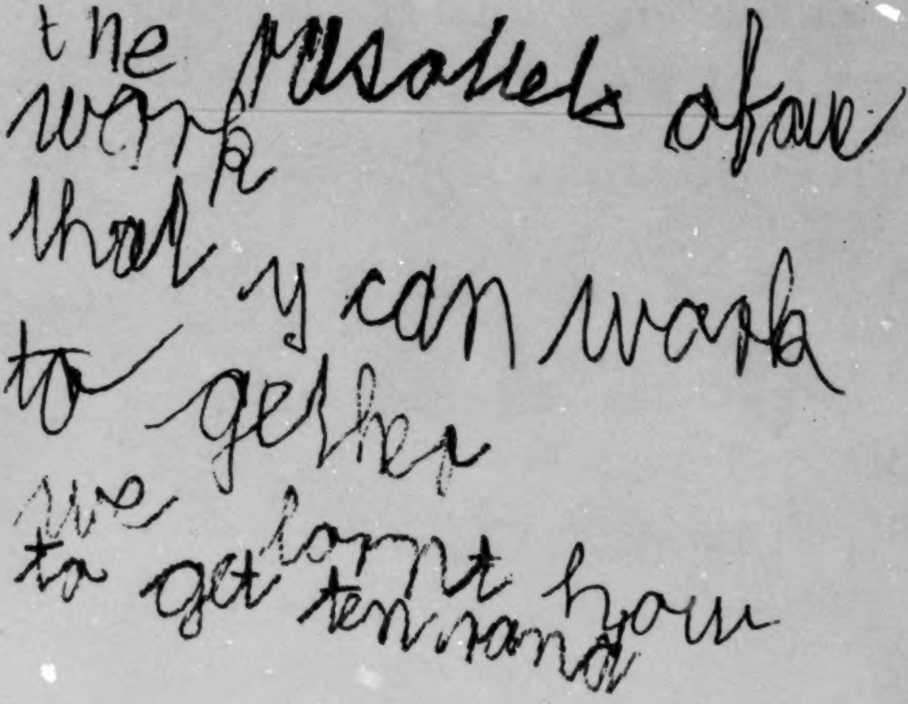

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Figure 4 : Roger (Example 1)

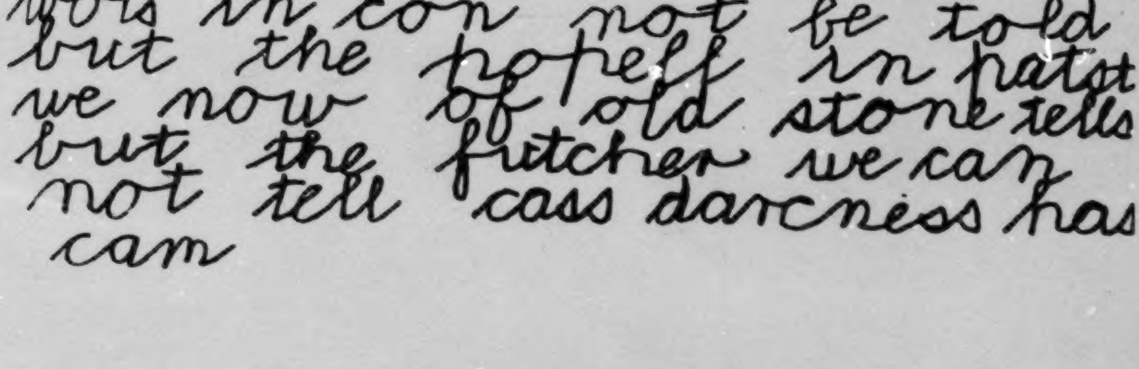

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Figure 5 : Roger (Example 2)

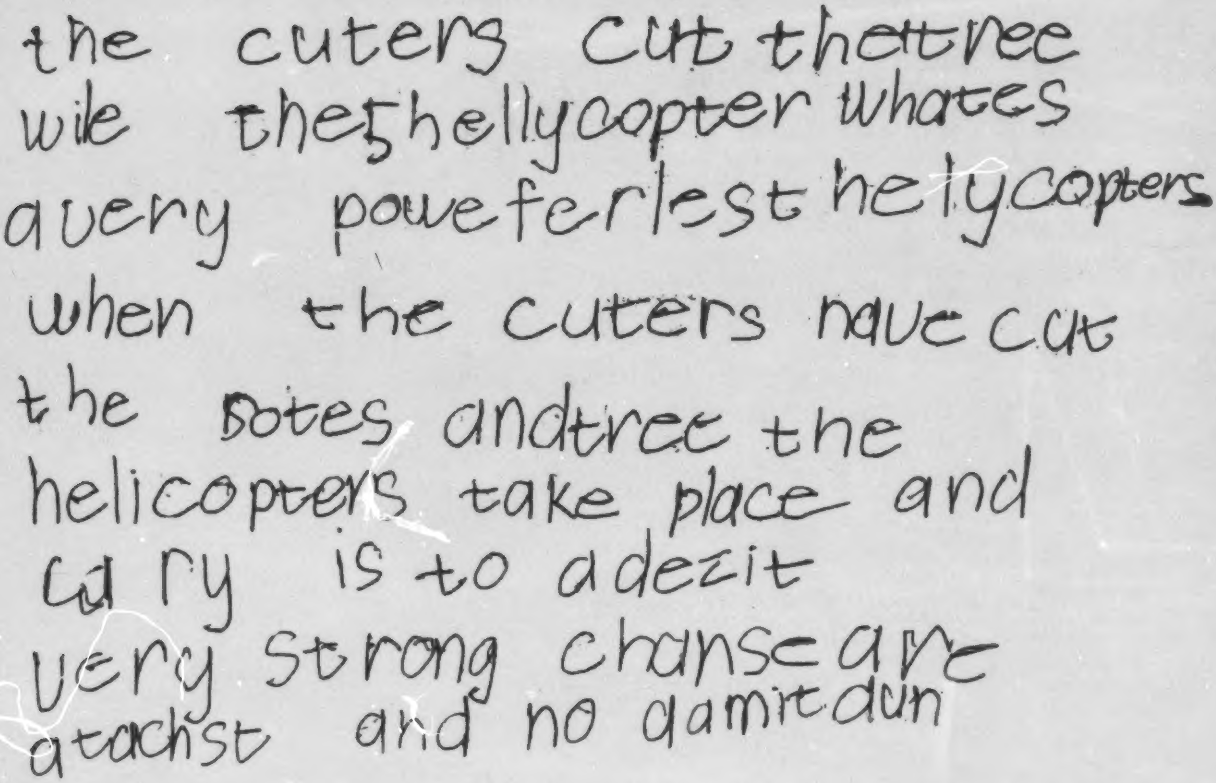

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Figure 6 : Roger (Example 3)

Yet when deciphered and *verbally* expressed, examples two and three become the following:

Example 2: in response to Session X : Abstract Art

What's in cannot be told
But the people in the past we know
Of old stone tells
But the future we can not tell
Cause
    darkness
        has
            come [1]

---

[1] The arrangement of the words is the writer's own based on the child's oral rendering.

Example 3: in response to Session V : Tree Felling

> First what I would do is get about 5 cutters who can cut the tree, but at the same time, I would get 5 of the most powerful helicopters getting very strong rope wires attached to the trunk and all the very strong branches, and make sure that nothing is in the way of it. Then they will cut through right to the middle. and as they stop the helicopters will lift up - and they have sort of wooden poles down the tree trunk so that the tree trunk won't sway. These cords are very good and can carry the great weight. The helicopters are very strong and they take the tree out into a desert where it gets burnt, but when they have done the ground part, you would have to just touch that up with a bit of grass.

Thus a child who possess superior intellectual potential (although the total N.S.A.I.S. score misses the 130 mark, being depressed by the non-verbal score), verbal precocity and creative talent (see the response to Session XI below) may not achieve his true potential in the classroom both in response to his feelings of 'being different' and in response to the other complications such as poor visual memory and difficulty with motor co-ordination. The ill-prepared teacher may thus miss such a child's talents altogether.

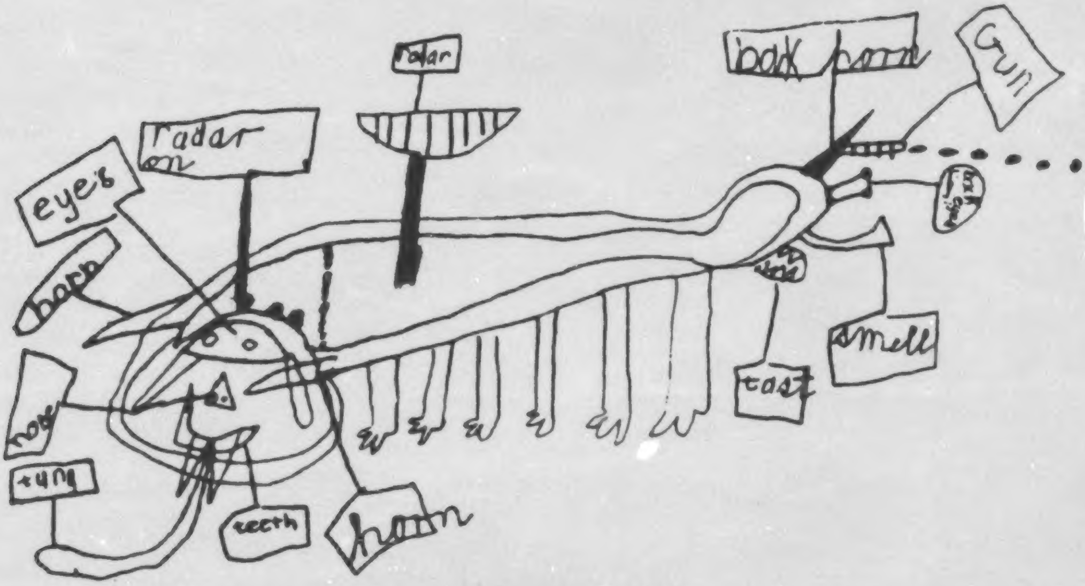

Figure 7: Roger's Response to Session XI.

6.2 An Attempted Definition

As complex a topic as creativity has obviously been approached and thus defined in many ways. Even the points of departure vary from collective life histories to illustrate how creative adults work (Ghiselin 1952), (Roe 1953), (Mackinnon 1962) through the steps inherent in problem-solving (Dewey 1933) to the development of tests designed to detect and measure creativity (Torrance 1966), (Guilford 1959).

The varying definitions reflect the different points of departure stated above. Some define creativity according to the quantity, neatness, cleverness or newness of products or processes either of a scientific or artistic nature (Taylor 1957, p. 111 and 112). Gowan and Demos describe the process as one of "hypothesis formation, hypothesis testing and the communication of results". (1964, p. 69).

H.D. Lasswell (in Anderson 1959) has defined creativity as: "A disposition to make and to recognise valuable innovation" (p. 203) and N.J. Levy (1961) sees it as: "A sensitivity to problems and an availability to outside experiences and impressions" (p. 61). Fromm (in Anderson 1959) considers it to be: "A capacity to face incongruity and tension, (an) ability to orient oneself towards the new, be aware of experiences and respond fully to such awareness".

The article entitled: "Reading For the Gifted and Talented" produced for the Office of the Gifted and Talented (1979) defines creativity simply as: "The process of combining what exists into something new, whether in the form of an idea, a procedure, or a product". Criscuolo (1963) provides a more specific definition of the processes involved in creativity, indeed he includes: "All the higher-order mental processes: perception, concept formation, seeing relationships, drawing conclusions, making comparisons, making applications". (p. 435 and 436).

Guilford attributes creativity both to processes and products by reference to various professions such as painting, inventing, writing, planning, composing, designing, acting and music making.

Margaret Gilchrist (1972) defines creativity in terms of creative achievement and creative potential assigning both originality and quality to these. She sees creativity as a special quality possessed by some intelligent people but not by all. She isolates certain characteristic traits such as initiative, dedication to work, dominance, independence of judgment and strong motivation as qualities found in creative scientists.

Other definitions of creativity focus on the basic abilities for creativity and problem solving such as fluency, flexibility, originality, and elaboration *(Reading for the Gifted and Talented 1979).* These abilities can then be subjected to testing. Fluency, for example, is the name given to the ability to retrieve information quickly and in sufficient quantity from the mind in response to a specific problem. Flexibility infers the ability to apply knowledge in different fields, originality, a penchant for the unusual and elaboration, the ability to complete or embellish an idea.

6.3 Characteristics of the Creative

In order to proceed through the skills described above to a 'creative' product the divergent or creative thinker is said to require certain traits noted by Taylor (1957) as humour, fantasy and playfulness with ideas, curiosity, manipulation and restructuring of ideas, questioning ability, autonomy, femininity of interests, dominance, self-assertion, self-acceptance, resourcefulness, radicalness and complexity of personality. Mackinnon (1962) has summarized the characteristics of creative people as follows: They are intelligent, original, independent in thought and action, open to experience both of the inner self and the outer world, intuitive, aesthetically sensitive and free from crippling restraints. They also have high energy levels, a persistent commitment to creative endeavour and a strong sense of destiny which includes a degree of resoluteness and a measure of egotism (p. 15 to 17).

6.4 The Encouragement of Creativity

It seemed likely, in the light of the above evidence, that some of the children in the writer's study groups would be capable of original and unusual written and oral expression. For this reason the atmosphere during the sessions was regulated, as much as was possible, to encourage creative production.

No value judgments were exercised and no marks or grades allocated. There was no pressure to produce work of a certain standard or, indeed, any work at all. There were no expected or set answers or media of response - the children could draw and label or write or record. Such freedom is considered in the literature to be essential for the encouragement of creative ideas and processes for "the gifted student flourishes in an atmosphere of freedom, acceptance, and stimulation" (Criscuolo 1963).

Kemp in "A Study of Rigidity in the Gifted Child" cited in Gowan and Demos (1964) states that creative thinking can be increased "by an atmosphere --- in which variation is accepted, independence favoured and psychological safety and freedom assured" (p. 84). Kemp also considers the traditional classroom experience "detrimental to creative processes" (Gowan and Demos 1964, p. 84).

Gowan and Demos (1964) sum up the position as follows: "Much of the research suggests that the creative process occurs most often and perhaps more effectively in the atmosphere that is free from the pressure of premature evaluation" (p. 87). Secondly an atmosphere of warmth and affection is required, for "all of us, and children especially, tend to create things for those we love" (Gowan and Demos 1964, p. 86).

The office of the Gifted and Talented, suggests four basic rules for teachers designed to encourage creative thinking namely: defer judgment, generate many ideas in number and kind, solicit free thinking of unusual ideas and bizarre notions and combine solutions. Some writers provide detailed practical suggestions regarding what can be done in the classroom to improve and foster creative output. Gowan and Demos (1964) for example suggest that one be:-

1) respectful of unusual questions
2) show children that their ideas have value
3) provide opportunities for self-initiated learnings and give credit for them
4) provide for periods of non-evaluated practice or learning when the child can feel free to make mistakes (Reading for the Gifted and Talented 1979, p. 89).

Ruth Strange (in Fliegler,1961) stresses that creativity does not develop in a vacuum for: "The potentially creative person needs encouragement, opportunities for expression, and sound instruction, he must derive satisfaction from the creative process and product" (p. 185). Strange proposes that creativity develops as the person responds selectively to his environment with sensitivity and perception and requires motivation, purpose, persistence, self-discipline, self-confidence and encouragement.

Torrance (in Gowan, Demos and Torrance 1967) suggests 10 ways for parents and teachers to help young children gifted in creative writing and speech namely:

1) Provide materials which develop imagination.
2) Provide materials which enrich imagery.
3) Permit time for thinking and day-dreaming.
4) Encourage children to record their ideas.
5) Give children's writing some concrete embodiment.
6) Accept the child's natural tendency to take a different look.
7) Prize rather than punish true individuality.
8) Be cautious about editing children's writings.
9) Encourage children to play with words.
10) Love them and let them know it (p. 210 to 219).

Much of the above advice remains too general to be of use. Which materials will develop the imagination or enrich imagery? Indeed even injuctions to 'love them' and provide an atmosphere conducive to creative endeavour remain so dependent on the personality of individual teachers as to be of little value as a general guide.

The problem of the nature of creativity (and even more so of the creative *child*) thus remains. For most teachers, and thus sadly for most 'creative children', its successful identification and adequate stimulation to a unique process or product may remain a matter of chance. There is no all-inclusive guiding definition. Creative adults may bear little resemblance to creative children, problem solving techniques are almost impossible to analyse, many are open-minded yet very few synthesise a multiplicity of stimuli into a unique production. Considered evaluation is thus difficult. It is relatively easy to quantify fluency, flexibility and even originality. Something new may be recognisable as such yet few have sufficient insight, experience, subject-specific knowledge and creativity to evaluate children's efforts in terms of relative 'creative' content. In addition other traits, poor motor control, inadequate expression, erratic spelling, illegibility or poor concentration may further obscure an already ill-defined area. The popular assumption that *everyone* possesses some 'creative spark' provides no reassurance yet may encourage teachers to attempt sufficiently interesting stimuli within a framework of freedom from premature evaluation in order to ignite dormant possibilities.

SECTION FIVE

THE LANGUAGE OF PRIMARY SCHOOL CHILDREN

1. Introduction

It is perhaps essential to begin a discussion of the language of the primary school child with the active mode i.e. speech or more properly, speech as it conveys particular meaning (i.e. talk). This is the means of expression with which the child is most familiar and therefore presumably most comfortable. The various theories concerning language development and its relationships to thought have been considered earlier. The emphasis in this section is on the nature of oral and written (i.e. active) language as well as of the receptive mode of reading among children of primary school age.

This section will highlight the differences between talking, reading and writing as linguistic modes of expression and also consider some of the problems inherent in their expression in the classroom - problems related both to the children's language itself and to the teacher's handling of language-based activities. The writer has merely selected some authors and their viewpoints from the current mass of literature on the subject in order to broadly indicate a framework within which to describe the reading, writing and talking skills of a group of primary school children with superior academic potential.

2. TALKING

2.1 The Nature of Talk

Martin *et al* (1976) state the importance of talk as follows : "All talk is significant and is the chief means by which we develop as individual and social beings" (p. 15). Talk is thus the primary mode of linguistic expression (although intimately related to other linguistic modes) and is central to both individual and social development. It is therefore important to understand its basic characteristics.

"*Talk is inefficient*" (Martin *et al* p. 169, Italics added) full of hesitations, repetitions, false starts and syntactical errors both in children and adults. There is no time as in writing to pause, reconsider or refine and thus it is to be expected that talk among primary school children, even those with superior cognitive potential,[1] will display such patterns as a result of the spontaneous nature of talk .

Talk is determined by the situation in which it occurs. Thus primary school children need "a variety of situations and challenges to consolidate and broaden their language --- to show how much children can do with the language they possess, how much they know and how ingenious they are in using it" (Rosen and Rosen 1973, p. 73). Rosen and Rosen propose personal involvement in the topic of conversation and pupil initiated talk to heighten the flow and structural complexity of talk amongst school children.

Martin *et al* (1976) propose 'everyday speech' with "its looseness, its relative inexplicitness, its focus on the speaker's own vision" (p. 18) as the best means of expressing thought and new learning. Thus teachers should encourage and respect it as a means of expression and learning.

Talk is functional arising from "some situation of doing, or feeling or thinking" (Martin *et al* 1976, p. 25). As such it reveals

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1) Or perhaps *especially* those with superior ability as they might be more consciously concerned with cognitive processes than with their expression.

individual differences and idiosyncracies and also displays a child's "process of thinking" (Rosen and Rosen 1973, p. 29). Indeed talking through matters can help children to "see cause/effect relationships and complexity quite naturally" (Rosen and Rosen 1973, p. 33).

Also revealed through talk is the fact that children have their own ways of learning and that some take longer to talk and join in than others. Rosen and Rosen (1973) point out that quiet children are not necessarily unco-operative, unsociable or without anything to say. The shy and inarticulate may need help in order to have their say but others merely need time "to formulate their thought more fully" (p. 47).

2.2 An Attempt at Classification

Rosen and Rosen (1973) define three broad types of talk namely "talking about the past", "talking while doing" 1) and "talking while observing" (p. 58). They see the primary school child's talk developing from the already complex elements of a five year old's talk (p. 60 and 61), i.e. :

1. *observation* (the need to express a strong social urge to share)
2. *questions* representing a search for meaning
3. *interpretation and generalisation* from observation and from previous experience and knowledge
4. *reasoning and argument* 2)
5. *expressiveness* (to gain satisfaction from the expression of feelings) and
6. *symbolic interpretation.*

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1) Luria's (1959) regulative function of language.

2) Compare Piaget's view that speech is egocentric at that age, "Rudimentary and linked to material action itself" (Piaget 1969, p. 20).

Martin *et al* (1976) in her classification stresses the *situation in which talk occurs* namely :

1. non-classroom contexts,
2. the inner worlds of the imaginative,
3. work talk in school,
4. playing of roles or models (p. 11).

The child in the non-classroom situation (with or without an adult present) may talk for different reasons at different ages. Thus at first he merely needs a listener or an accompaniment to create and sustain imaginary situations, at five or six talk may sustain friendly social encounters whilst at seven he may talk out his troubles in an attempt to understand his own situation (pp. 28 to 35).

Later, at primary school level, he may discuss school topics in everyday terms and in informal settings. Group talk may be characterised by displays of expert knowledge interspersed with reminiscences, choruses of agreement and shared opinions (p. 58 and 59).

The talk representative of inner worlds progresses from the three year old's natural poetic expression, through the seven year old's under=standing of the conventions of story telling to a fantasy world expressed as dramatic dialogue. Rosen and Rosen (1973) suggest that the desire to fantasize and make up words has usually receded by the age of eleven but that children of high intelligence might switch to common usage and more conventional speech earlier.

'Work talk' in school is generally considered by teachers to be the sort of responsible talk that aids school learning. Yet Martin *et al* (1976) propose that :

"children talking among themselves *can* advance their understanding in important ways" (p. 79). A similar view is held by James Britton in the article 'Talking to Learn' (Barnes, Britton, Rosen 1974).

Role playing and model adoption requires "appropriate language patterns" (Martin *et al*, 1976, p. 144). The situation determines how formal the language should be and during formal discussions children are able to formulate, test and revise their view of the world, confirm or enlarge each other's understanding of some of the basic facts of living, gain practice and confidence with words and indulge in a social and rational act.

Martin *et al* (1976, p. 208) stress that progress in talk depends on personality traits and on certain social qualities and skills such as concern, generosity, courtesy and humility. More specifically note is made of such techniques as :

- being sufficiently interested in someone else to ask them questions, and listen to their answers;
- being prepared to let someone have his head; allowing him time and space to formulate and reformulate an idea without interrupting him, and to support him with little encouraging noises;
- being prepared to hold one's own point or interest temporarily in abeyance so that one can help someone else in his formulation, and so that the main thread of the discourse is not lost;
- being prepared even to lose the chance of voicing an idea because the other person, or the mainstream of the argument, is more important;
- being able to participate in the formulation of a group construct to which all have contributed and now subscribe.

It is unlikely that even the older children in the writer's study groups (i.e. the ten and eleven year olds), no matter how advanced intellectually, could cope with *all* the above-mentioned social skills. A detailed description of the children's patterns of oral behaviour, in formal talk, tape recordings and discussions is provided later in the text.
The extent to which primary school children are able to exercise their desire for informal everyday chatter, talking to learn and the perfection of conversational skills depends largely on the attitude

of the teacher to the place of talk in the school format and to the importance of his or her own preference for "teacher-talk" 1).

2.3 The Teacher's Role

2.3.1 A Suitable Atmosphere

Rosen and Rosen (1973) advocate the open classroom as the ideal situation in which children may explore and discuss with other children, learn through a curiosity to know and *talk* whilst doing so, so that exploring the environment includes "the verbal exploration of the environment" (p. 56). Certain basic principles or techniques are, however, just as likely to foster talk no matter what the physical arrangement of the classroom.

Firstly, children are seldom short of ideas or language and may talk profitably for considerable periods of time (often for two hours at a time in the case of the writer's study groups A and B). If teachers were not to separate 'work talk' as something which is useful for self-knowledge from all talk which helps to "assimilate experience and build a world" (Martin *et al*, 1976, p. 15) and would "...*let* talk happen where it would naturally happen, and ... organise things so it *could* happen" (Rosen and Rosen 1973, p. 84) children at primary school level would be much more likely to initiate conversation and sustain it. Speech is after all the matrix from which one moves to new and difficult situations and thus it should be encouraged as important to the learner - especially as it occurs in its everyday form.

The nature of the teacher's role in guiding such talk obviously requires a subtle balance between directing and facilitating whether

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1) Which predominates according to Barnes *et al* (1974) in most classrooms.

the teacher is physically present or not. As Martin *et al* (1976) phrase it "Adults need to know how to operate balance - help them to talk when we aren't there and enable them to bring in everything they need to when we are". In other words, the teacher's role may be that of "joint chairman" (p. 27) or 'background facilitator' but this can only occur if the teacher is not intent on single-minded transference of facts and data. The teacher thus merely monitors and comes in on "a process that is basically running itself" (Martin *et al*, 1976, p. 143). Indeed "The interpersonal process of inquiry that children will, in the right set up, get going by themselves can take them further than we usually suppose" (Martin *et al*, 1976, p. 143).

The correct atmosphere might be established by a willingness to listen, by helping others to formulate ideas without dominating the scene, helping to keep the topic open and promoting deeper formulations. Certain techniques described below may help to promote such an atmosphere.

2.3.2 Facilitating Techniques

Teachers often consider that questioning promotes a spirit of enquiry. As the extensive consideration of the matter by Barnes *et al* (1974) has shown, careless and inept questioning techniques often elicit one-word answers and cut off "the vital elements of a child's speech" (Rosen and Rosen 1973). Teachers seldom take time to really listen to their pupils and share experiences so as to allow the child expression of the true linguistic competence he possesses. Indeed Rosen and Rosen (1973) would propose that "children have available much more linguistic competence than usually finds its way into their speech" (p. 65).

The use of the tape recorder may assist primary school children towards a wider range of language use. The writer found that the presence of an unknown adult disturbed the children and even seemed to restrict the flow of their free speech yet the presence of the tape recorder was unobtrusive in the general recording of the sessions and a novel means of expression for individual use.

Both Martin *et al* (1976) and Rosen and Rosen (1973) comment on the favourable reaction of children to the tape-recorder - it adds incentive to efforts, heightens the expressive quality of language (Rosen and Rosen 1973, p. 53) and heightens the speaker's sense of audience (Martin *et al* 1976, p. 12).

Teachers might also do well to instruct children in the qualities and skills which encourage both true conversation and self-confidence. Martin *et al* (1976) mention some of these namely, the need to relax and not to feel threatened, removal of the need to win an argument to prove oneself or defend present views against attack so that conversation becomes an "exploration of like-minded people" (p. 208).

The above reference to talk has been given considerable space and indeed a measure of priority not necessarily because it is a better mode of expression than writing but because it does have a place (and one often neglected until now) in the primary school.

3. WRITING

3.1 The Nature of Writing

To the layman, writing may seem an exact graphic representation of the other active mode of language, speech. In fact writing differs significantly from talking and has a firmer grammatical structure yet not a different grammar. Rosen and Rosen (1973) more specifically differentiate writing from talking through its lack of intonational and other clues, its need for analysis and the necessity of forward planning.

Almost all children talk sufficiently well to make themselves understood. Users of what Bernstein, in the sixties, called 'restricted codes' have no difficulty in basic communication among peers. Yet many children, no matter what their socio-economic background, do experience difficulty in the school taught areas of reading and writing. The variety of theories noted previously in this work concerning the nature of language development and its relationship to thought served to predict the lack of a completely valid theory of how children learn, or do not learn, to write.

Burgess *et al* (1973) suggest in fact that, "We need to locate difficulties which children find in learning to write in the nature of writing as well as in the children" (p. 12).
Before the era of education for all, writing was carried out by the few for specialised purposes. On the one hand we must query, with Rosen and Rosen (1973), how much writing is actually *needed* in life. As he bluntly states, "It is easy to think of many reasons why a young child should not want to write and very difficult to think of reasons why he should" (p. 84). On the other hand, despite the difficulties inherent in writing, there are certain advantages to the written word. Writing allows time to select "more pondered inventions" (Rosen and Rosen 1973, p. 91) to find the correct meaning for the context. It is not an end in itself, it helps us do something better, think, act, co-operate, influence or be understood, and grapple for expression.

Writing is able to reduce time lapses and recreate experiences. It also allows for explanation and accumulation of data in order to arrive at a logical conclusion - an exercise perhaps particularly relevant for the intellectually superior. Writing has, too, a benefit of a less academic nature for it "gives children a chance to withdraw from day-to-day pressing contacts, to work out what they think, to record their doings and to sort out their feelings" (Rosen and Rosen 1973, p. 142).

Yet as Burgess *et al* (1973) stress, writing is not easy for "It imposes demands on the performer which do not characterise in the same way either our *active* use of language (talking) or our *receptive* ones (reading and listening)" (p. 11). The skills involved in learning to write are multiple and complex: primarily transfer from an aural to a visual medium is required and this entails mastery of the specific skills of spelling, punctuation and the resources of a more formal grammar than that required in talk. Beyond these skills lies the more subtle difficulty of location in terms of "relations with -- readers and their expectations as to the kind of thing (written)" (Burgess *et al* 1973, p. 17). In addition there is of course the most important element in any piece of written work namely a search for meaning.

It is no wonder then that

> What children can write is often far simpler than what they can speak, nor that in the endeavour to transfer to writing the complexity of the ideas they can handle in talk or 'in the head', they sometimes launch themselves without arriving.
>
> (Burgess *et al* 1973, p. 12)

This latter difficulty is termed a 'maze' by linguists. As far as children with superior intellectual knowledge are concerned two possibilities seem to exist; either they should cope better with the change of medium and analysis of grammatical structure that is required in writing or else the greater complexity of their ideas may be reflected in an even more marked inability in their written expression.

A link with the theories concerning the development of speech and its relationship to thought may be profitable here. The Piagetian approach would propose the gradual decline of egocentric speech whilst Vygotsky's approach would consider it to become internalised, compressed and individuated until "the child thinks inwards" (Rosen and Rosen 1973, p. 269). Rosen and Rosen (1973) propose the necessity of a certain developmental stage before writing can be successfully mastered namely the development of inner speech (often aided by external speech as is reading). Luria (1959) proposes that in fact writing helps us develop inner speech (using language in our heads to think) because the former requires planning. Burgess *et al* (1973) sum up the difficulties involved thus: "The fundamental problem with children writing is not so much that children find it difficult, but that it is difficult for everyone" (p. 12).

3.2 The Classification of Writing Types

Despite the difficulties stated above, children do not learn to write without some basis from which to begin. They have all their previous experience of talking, listening and reading upon which to draw - an internal framework together with the nature of the external framework in the form of topic, audience, and other factors.

The classification of the external framework poses some difficulties for as Rosen and Rosen (1973) point out, "We lack both a theory and the supporting investigation to be more precise about the different forms of writing in the primary school. The terms usually used are totally inadequate" (p. 95).

Writing is popularly divided by teachers into that which is 'creative' and that which is 'formal'. The latter implies some sort of learning. Rosen and Rosen (1973) state quite harshly that :

> We are so utterly indoctrinated to believe that no true learning has taken place unless it is written up or written out that no one has seriously examined what kinds of learning in any field might take place without a word having been written. (p. 132).

Thus children in the primary school and elsewhere spend much of the time writing so as to tell the teacher "what he already knows so that he may judge whether the pupil knows it" (Barnes *et al* 1974, p. 142). They reproduce facts, copy and are kept occupied with 'busy work' which has little or no real impact on their lives.

Indeed perhaps all writing should be 'creative' in the sense that it is meaningful to the writer i.e. close to first hand experience and to talk. Rosen and Rosen (1973) suggest that it is "dangerous to have a stereotyped view of what 'creative' or any other type of writing is" (p. 102).

Burgess *et al* (1973, p. 17 and 18) describe the classification advocated by Barnes, Britton, Rosen and others. Language is classified according to its *function* as *transactional* (i.e. informative and persuasive as in philosophy and science) *poetic* (i.e. an art form) and *expressive* (i.e. an intimate, informal and relaxed exchange). It is likely that the latter form will predominate in young children's speech. It should perhaps be exploited to stress the necessity of quality above quantity, to convey *real* meaning, (i.e. to include *feelings*) and to tell a story, provide information, solve a problem or get things done (Rosen and Rosen 1973, p. 143). The successful completion of any piece of writing but especially of writing in the expressive mode depends very much on the teacher's influence.

3.3 The Teacher's Role

All writing occurs within the confines of a particular situation and it is invariably the teacher who determines its nature, namely by stipulating the topic, the person to whom it is directed and physical means, limits and possibilities such as length and time allowed for completion. If children are to write with a particular end in mind whilst still maintaining meaning they need both experience with a wide variety of types of writing and the freedom to choose both the nature of the topic and the time and the means of its expression. It is only through freedom to experience such variety that a 'feel' for the audience (i.e. either formal or colloquial) and for the appropriateness of modes of expression can develop.

As Burgess *et al* state, children "need to try things out too, to experiment and test themselves in a situation which is not critical" (p. 21). The adult's role in this situation is seen as one of developing confidence rather than "... assessing a performance" (p. 21). In order to do this a child needs a great variety of first-hand experiences and freedom from "restrictive choices and the imposition of a fixed way of treating a theme" (Rosen and Rosen 1973, p. 95).

Indeed children write mostly what teachers *expect* them to write. A first draft in which child and topic are intimately involved in the communication of significant meaning is rare. Children are often more concerned that someone (preferably an adult) should determine both the form and content of their writing than to evidence the immediacy and exuberance so often reflected in their speech. They seem to feel safer within the narrow confines to which they seem to have become accustomed.

4. READING

4.1 Introduction

The ability 'to read' is perhaps the most prized goal in the early primary school years. Children are often grouped as 'good' readers, 'readers' or 'in need of remedial attention'. The topic is almost emotive especially as it concerns children who have been taught to read (or have taught themselves) prior to school entry. In the senior primary years much of the curriculum is based on the assumption that children have mastered both the basic technicalities inherent in the reading skills and, indeed, have progressed beyond these to a fairly sophisticated understanding of the nature of meaning and context. Reading ability thus immediately becomes related to scholastic achievement. Often the complexity of the skill is forgotten, as are the visual and perceptual skills required for word-recognition, memory skills and the ability to read ahead for meaning i.e. the complex cognitive processes involved in deciphering a complex coding, decoding, meaning inherent, organisational pattern.

That teachers are confused as to the nature of 'reading' ability is thus understandable 1). That most teachers are aware of the import=ance of reading, however, is equally clear yet in the writer's experience their monitoring of the children's progress once a child is labelled 'a reader' is poor and even displays a lack of interest.

4.2 The Nature of Reading

Martin *et al* (1976, pp. 3 to 27) survey the issues arising from the 1975 Bullock Report entitled *A Language for Life* (HMSO). Much of what is reported concerning reading serves to define its nature more succinctly than has been the case in the past. Although the Report

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1) See the opinions expressed by the teachers of the children in the writer's study groups in Section Seven.

is concerned with the secondary school in particular much of what is said must of necessity reflect on the primary school situation for it is there that the foundations are laid (or not laid).

Some of the general recommendations of the report follow :

a) The need for reading and writing skills has increased despite the more obvious noticeable predominance of visual and oral communication media. Reading is still the dominant means for obtaining every-day information and for learning.

b) Reading is tied to the level of verbal experience and is often a base from which writing and talking skills grow.

c) The teaching of reading is a continuous process. There is no single step to a definite point at which a child *can read.* There is no threshold for "pupils need help with their basic primary skills in reading well beyond ... early thresholds" (Martin *et al* 1976, p. 20) and "Word recognition is merely the primary skill inadequate on its own. There is a hierarchy of reading skills, through the intermediate skills of sequences of words to the comprehension skills" (p. 20).

d) The above skills require positive teacher intervention, "... within a real language context" (p. 22).

Rosen and Rosen (1973) suggest the title of *real readers* for some children, the few "... who will read three or four books a week on any and every subject" (p. 165). A 'true reader' has control of his language experience ,

> He can decide about *input* , that is to say while he can scarcely control the speech of those around him (except perhaps to switch it off!), he can begin

> to seek out the book he wants, ignore those he dislikes and even in one and the same book go back, skip or stop reading. Reading then can contribute to the child's sense of himself as an autonomous learner
>
> (Rosen and Rosen 1973, p. 166).

4.3 Some Approaches to Reading

By 'approaches' the writer does not mean methods of teaching initial reading skills for these are almost infinite and a discussion of their relative merit would be complex whilst not really germane to the present topic. Instead the writer would like to propose several general points of interest related to general techniques and more specifically to those children who might be designated as of superior intellectual potential 1).

Reading must be seen as intimately interrelated with the other language modes. Certain tendencies in the primary school to regard reading as a separate, specialised skill hardly related to other pursuits and subjects have led to some peculiarities which may affect a child's entire language outlook even beyond the early years. First of these is, of course, the use of repetitive and monotonous graded readers. Rosen and Rosen (1973) point out the danger of their use to other language areas "When they (children) come to write for themselves they imitate the examples presented to them" (p. 162). This is likely to be especially so for children who lack self-confidence or confidence in the verbal area no matter how intelligent they may be. In fact "Even from the very early stages we may be teaching many children to mistrust their own ways of thinking in preference to the safe, stereotyped construction" (Rosen and Rosen 1973, p. 162). This tendency may hide both creative and linguistic talent.

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1) A detailed discussion of reading for the 'gifted' and the reading habits of the study group children occurs later in Section Seven.

Wallen (1971) remarks on the teacher's tendency to assign readers on the basis of years of schooling rather than on current reading achievement level. Children may even be prevented from progressing through a graded scheme for fear of encroachment on the following year's scheme. He thus proposes a criterion-referenced approach to reading by means of which performance objectives are set, followed by instruction and retesting where necessary. Such objective measurement of reading skills may not always be an adequate tool but what is certain is that some more effective procedure than random allocation of readers to school levels is required, particularly for the child with superior intellectual potential whether he possesses superior reading skills or not.

Certain American writers propose what is termed 'creative reading' and stress the broader general advantages of reading viewed as both process and product i.e. word-attack skills as well as reading "for information, clarification, verification, pleasure and escape" (Barbe 1971, p. 67). Creative reading for those of superior cognitive ability should entail "More than merely reading beyond what the author intended ... (it) becomes an element in the character and goal setting development of each child" (Barbe 1971, p. 67). Isaacs (1971) claims wide benefits for this type of divergent, interpretive, predictive and evaluative approach to reading. These include a notion of "Who (the child) is and who he might become" (Isaacs 1971, p. 63) and scope for the imagination in the midst of other limitations. Barbe (1971, p. 67) also proposes 'critical reading' which might include analysis, synthesis and evaluation, as well as a consideration of the author's background and motivation.

These approaches are not unlike the Bullock report's call for a less rigidly graded and delimited attitude to all children's reading. "Thus the seven-year old should be faced with inference, reorganisation, evaluation, and appreciation, much as word recognition, word attack skills, and the intermediate skills of sentence construing should not be thought of as left behind in the secondary school" (Marland *et al* 1977, p. 21).

5. OVERVIEW

It is interesting to consider the points mentioned above in the light of the Bullock report's recommendations and in the light of present teacher attitudes to the whole range of language activities in the primary school.

The Report is concerned with the role played by language in learning and the obvious need to meet the reading proficiency level demanded by various school subjects. The reciprocal interaction proposed i.e. that subjects should be more integrated and that language development and content learning should go hand in hand, has not always come to fruition.

There are several reasons for this state of affairs. Firstly, the process is complex on a purely organisational level. The implementation of a 'whole school language policy' in which each teacher is clear as to his or her role as general disseminator or specialist and teacher of particular language skills in order to achieve, "coherence whilst retaining variety" (Marland *et al* 1977, p. 9) is no mean feat.

Other difficulties which may impede unity between the different modes of language, between language usage across subjects and between school levels may perhaps be more directly explained by a consideration of general teacher, head teacher and inspectorate attitudes.

That teacher-talk predominates in most primary school classrooms is clear (Barnes, Britton and Rosen, 1974). Many teachers and their superiors prefer quieter, restricted and controlled writing skills to expressive pupil-talk as a learning medium. Indeed allowing the latter requires considerable flexibility and patience. Inspiring the type of talk which will enable children to learn in their own ways further requires an understanding of types of talk, the situations in which they arise and considerable creativity on the teacher's part.

Learning through talk includes the understanding of broader concepts and social skills such as the nature of conversation and discussion. That many teachers are not aware of the above benefits of 'talking to learn' (Barnes, Britton and Rosen 1974) and that their superiors are sometimes unwilling to allow experimentation is a clear indication that this new field of enquiry will need considerable time for its benefits to begin to permit the use of more individualised learning styles through language.

Further research is necessary into the relationships of reading, writing and talking skills one to another and to the cognitive processes which both underlie and accompany them. One of the ways in which teachers might further such research and, at the same time, increase their understanding of the children in their care, would be to allow children more time to talk *through* their experiences rather than *around* them when difficulties occur.

The firmer grammatical structure and the more rigid conventions of writing as opposed to those of talking have already been noted. Many primary school teachers having little need to write original work of any length have not achieved, either by practice or learning, an in depth knowledge of types of writing or of their conventions. It may thus be difficult for them to teach such skills to the children 1). Head teachers and inspectors may be more concerned with neatly presented and marked exercises and copying than with the inherent quality of the writing or of its relationship of the child's learning or cognitive processes.

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1) Professor B.J. Wagner in fact described an in-service course for qualified teachers (The Chicago Area Writing Project), to teach them the writing skills they themselves demand of pupils at the Third International Conference on the Teaching of English held at the University of Sydney in August 1980.

Reading ability has a profound effect on a child's scholastic performance and thus also on his self-concept. It is thus important that teachers should understand the complexity of the hierarchy of reading skills and the need for their continuous teaching and encouragement. To this end head-teachers and the inspectorate need to stipulate clearly which skills should be taught at successive levels.

The brief review of certain topics of concern in the teaching of language in the primary school in this section is followed, in the next, by a general review of programmes for the 'gifted' and a more detailed consideration of the researcher's own programme and techniques.

SECTION SIX

SPECIAL EDUCATIONAL PROVISION FOR CHILDREN WITH SUPERIOR POTENTIAL

1. Introduction

The previous sections have served to provide a general survey of the theories basic to an understanding of the themes underlying the stated topic - namely the nature of intelligence, the relationship between language and thought, the intelligence quotient score, the nature and identification of 'giftedness', 'talent' and 'creativity', the language of the primary school child and a description of the background data concerning the writer's study groups.

The present section serves to link the preceding background information to the more specific detailing of the writer's findings concerning the study groups as related in subsequent sections. It includes a general literature survey of the nature, content and techniques used in some programmes for the gifted, and a detailed description of the stimuli and techniques employed by the writer together with the children's and parents' evaluation of those.

The programme itself, although based on certain general themes (Bloom's taxonomy, the need to practise viewing circumstances from alternative perspectives, the predominance of practice in the higher cognitive processes) is largely based on the writer's own ideas. The value of the programme lies not so much in any inherent worth but in the reactions and linguistic responses to it. It is merely a basis from which to proceed to an analysis and interpretation of some linguistic tendencies amongst primary school children of superior measured intellectual ability.

2. Programmes for the 'Gifted'

2.1 The Nature of Programmes for the 'Gifted'

The nature of any programme for children designated as 'gifted' or as possessing superior ability or potential is determined by the nature of the definition used to identify such children. Such definitions might include children who are 'rapid learners' (York *et al*, undated), 'superior performers and good lesson-learners' (Renzulli 1977), 'intellectuals' (Gowan and Demos 1964), 'superior scorers' on intelligence quotient or other standardized tests, or those possessing special talents in particular fields such as maths, science or language (for example, The Study of Mathematically Precocious Youth at Johns Hopkins University).

Clearly programmes designed for such widely diverse categories will vary considerably both in content and technique. A further basic difference between programmes is likely to consist in their relative stress of cognitive processes (usually based on Bloom's or Guilford's models) or more tangible *products* for example such as one specified by Gowan and Demos (1964): "The ultimate goal, of course, is to reach the point where our gifted children write spontaneously and enthusiastically on subjects of their own choosing" (p. 148).

Any programme specially designed to cater for a particular group, whether in a special class, school, or merely as individualised extension in a heterogeneous group, *by its very nature*, must exclude some children designated as 'gifted' by *another* definition. Thus a programme for 'rapid learners' excludes the ponderous child and the late maturer; one for 'good lesson-learners' excludes the under-achiever with a high intelligence quotient and those with specific learning disabilities and one based on intelligence quotient scores alone may exclude the 'creatively gifted'.

Thus there can be no generalised 'programme' for 'gifted' children without due consideration of the nature and needs of *particular* children or a *particular group* of children. Thus so-called 'individualised instruction' might appear to be the ideal answer. Yet as Renzulli (1977) points out individualised instruction is often little more than "a common body of prescribed material", covered at different rates, i.e. jumping "through essentially the same set of loops" (p. 15). What follows is a brief summary of some of the characteristics of programmes proposed for the groups of children characterised above.

York *et al* in their undated programme for rapid learners in Grand Forks Public school provide some detailed and useful ideas for stimulation in the social sciences, mathematics and language arts from kindergarten to grade 6 (i.e. pre-school to ± 11 year olds). The programme fails to consider the underachiever or the 'bright' child with emotional or other problems which affect his scholastic proficiency. Skills to be taught are divided into three categories; developmental, creative and recreational and can generally be said to accelerate the ability of those *already* displaying 'accelerated' skills. Items include early introduction to dictionary skills, grammatical categories, etymology,original work and literary appreciation.

Renzulli (1977) proposes a hierarchy of enrichment activities (Types I, II and III) for those children *performing* at clearly more advanced levels in particular content areas (i.e. those displaying a balanced interaction of above average ability, task commitment and creativity thus resulting in superior performance). He would thus exclude as in need of special consideration those of high ability but lacking motivation.

Much of Renzulli's work springs from a desire to endow 'gifted programmes' with a programmatical defensibility i.e. with a theoretical basis which embraces the need for a particular type of activity namely "general exploratory activities", "group training activities", and finally "individual and small group investigations of real problems" (Renzulli 1977, p. 14).

Renzulli advocates proceeding from the child's in depth self-analysis of his/her areas of interest (actual or potential) ascertained by answering the 'Interest-A-Lyser' questionnaire. 'Process-based' activities (either based on Bloom's or Guilford's models) are then advocated in order to *develop* the skills necessary for advanced levels of enquiry achieved at level III. Here, freedom of choice and response must be maintained at all costs, until the child becomes an *actual investigator* of *real problems* using the *appropriate methods* of enquiry. The child is thus pre-eminently *producer* not consumer and must communicate his or her results in a professionally appropriate manner. Renzulli has based much of his approach on the premise that 'gifted' adults are *producers* in certain areas of human problem - solving or artistic creation - i.e. those who have *'after the fact'* recognition after working on *real world* problems. From this basis stems his plea for consideration of "sincere interests", "real problems", "authentic audiences" and "tangible products" (Renzulli 1977, pp. 66 and 68).

Gowan and Demos (1964) name the 'gifted' child's intellectual nature as his outstanding characteristic - that which distinguishes him or her from the generality. Thus the child is better able "to manipulate symbols and to engage in abstract thinking" (Gowan and Demos 1964, p. 40). Thus:

> He needs the tools of his trade— symbols and ideas. The prime need, therefore, is to facilitate this symbol manipulation in linguistic and quantitative fields — in languages and in mathematics, which leads us directly to enrichment in terms of depth. Certainly the gifted child will profit proportionally to his ability if he can remain creative and original and he

> needs stimulation and exposure to new ideas and experiences. But primarily he needs 'exercise' and development of his ability to think so that he can have the widest range of cultural experiences at a greater depth than is possible for his fellows of average ability.
>
> (Gowan and Demos 1964, p. 140 to 141)

The above lenthy quotation is justified in terms of its relationship to the next group of children i.e. those identified and provided for on the basis of superior intelligence quotient scores i.e. potential intellectuals but not necessarily 'rapid' or 'good' lesson learners.

Gallagher (1975) points out that the higher one goes up the I.Q. range the greater the need for highly individualised programmes: "Since with fewer children available one would rarely find children with closely matching abilities" (Gallagher 1975, p. 12). He also states that because of insufficient challenge in heterogeneous groups children are unable to sustain efforts. Thus he proposes homogeneous grouping where: "Gifted children are not restrained by those of lesser ability ... and thus the teacher feels free to create an environment where difficult problems can be considered" (Gallagher 1975, p. 141).

Some of the abilities possessed by children of superior intelligence which may require the type of individualised treatment suggested by Gallagher above, might include the attainment of concepts "by testing hypotheses while children of average intelligence do so through more of a rote process", (research by Osler and Trautman cited in Amster 1965, p. 545) as they "have more different associations to any two stimuli than average children do" and "use deductive reasoning in confirming" solutions (Amster 1965, p. 545). This last proposal is generally substantiated by Donaldson (1978) who suggests that: "Children are not so limited in ability to reason deductively as Piaget and others have claimed" (p. 58). One might suppose this particularly true of children with superior intellectual ability.

Colley (1979) of the In-service Education Division of Services, New South Wales Department of Education, provides a brief yet comprehensive summary of the general nature of programmes for the 'gifted' which goes beyond the specialised definitions provided above. Whilst accepting the need for balanced emotional and social development requiring basic skill mastery, early and speedy acquisition of concepts, productive expression of talents, guidance in decision-making and exposure to a wide variety of learning experiences, the need for a distinctive curriculum focused on conceptual development is stressed. Such a curriculum is achieved through the processes of inquiry, creative and productive thinking, aesthetic expression, problem solving and expanded content. It stresses a wide range of basic principles, knowledge of processes as well as products and consideration of a topic both in depth and breadth (Colley 1979, pp. 20 to 22). Such strategies allow the bright child to cope better with the present knowledge explosion by stressing strategies rather than the retention of facts. They allow too the attainment of goals proposed for special programs for the talented in the state of New York (as cited in Colley 1979, p. 20 and 21) namely: superior achievement, self-directedness, acceptance of responsibility, creative thinking and expression, aesthetic awareness, acceptance of divergent views, pursuit of alternative solutions, commitment to enquiry and, ultimately, preparation for satisfying life-styles and careers.

The general recommendations stated above would traditionally be entitled 'enrichment' programmes for use either in the ordinary classroom or in special groups. The other traditional method for teaching the gifted, namely acceleration (skipping a year or two usually in the primary school), has not been discussed as it is merely an administrative move and usually requires that the child participate in the normal programme of his new class.

2.2 Subject Matter and Techniques

Renzulli's (1977) complaint is that much of what is offered in the name of gifted education is merely 'cosmetic' both as regards the content and the techniques employed in conveying it. Indeed some proposals for use with the gifted are infact relatively simple ideas already used in many classrooms (see for example Congdon 1978). Thus Gallagher (1975) proposes a *new pedagogy* "Which is necessary to present these difficult ... concepts to bright but immature minds" (p. 119) - a different curriculum, presented differently.

This is impossible unless teachers are willing to accept that "Certain children are ready on all counts - psychological, intellectual, emotional, and physiological - to go into fields of learning which are far in advance for their chronological age" (Martinson 1968, p. 17). Even once such recognition has been achieved teachers need to readjust both their attitudes and techniques considerably. Some of these include a general shift of both content and methodology towards more abstract knowledge and symbolism, (Martinson 1968) or skill development whilst the child follows his *own* interests and the elimination of repetition and drill where this is possible (Cranston School Department Curriculum Guide, 1971). Teachers need the flexibility and open-mindedness to present an assignment so rich, so laden with choices that the child is more concerned with his own choice than with what the teacher wants.

Beyond these general skills lie others of a more technical nature. Teachers who wish to take content beyond factual knowledge and to exercise the skills inherent in the higher cognitive levels must understand (and more important be able to *use*) the processes described in models such as those devised by Bloom and Guilford. They will also need to be able to devise limited objectives to test the accomplishment of these skills.

Gallagher (1975) states that: "It is entirely possible to develop a curriculum or a unit of study in which only units, classes, or associations are stressed, and any transformations or conclusions may be given or predigested by the teacher" (p. 182). He also notes in an article (1962) the tendency for the majority of both teacher questions and student responses to fall in the cognitive-memory area. Second most frequent was the category of convergent thinking. He thus makes a plea for more exercise in the area of transformation, a skill "which demands the ability to change existing circumstances to different forms or structures", and which has "obvious implications for preparing gifted children for a flexible approach to the present, so that they can modify it for the future" (Gallagher 1975, p. 181).

He also stresses the need for evaluative responses based on factual data and which "require the student to establish some value continuum and then to weigh various alternative actions or persons on these value dimensions" (Gallagher 1975, p. 185). Such responses might not be amenable to infallible correction but teachers should be able "to indicate the implications which would follow from certain decisions" (Gallagher 1975, p. 185). Such techniques may be used to evoke truly divergent thinking. It is clear that the application of the above techniques requires in-depth and thorough initial teacher-training or in-service courses both in the field of general education of the 'gifted' and as concerns the use of specialised procedures.

2.3 A Suitable Climate

The above section has advised a curriculum which is stimulating, new, exciting and generally different in quality in order to "lure the children to think and behave in new ways, also prompt them to reach out in language and take hold of more of the resources available to them" (Rosen and Rosen 1973, p. 32).

Such activities require a particular 'climate' in the classroom as do those designed to inspire creative thinking processes; i.e. an atmosphere which favours variation, independence in assured psychological safety and freedom (Gowan and Demos 1964).

Buescher (1979) makes an interesting plea for 'playfulness' as a strategy in teaching the language arts to gifted children. He suggests an attitude of 'playing with' and 'enjoying' the process of learning, an attitude he finds lacking in so many classrooms and in so many teachers.

'Playfulness' is related to pleasure, leisure and 'security from error' but does not inhibit other essential elements such as concept formulation and enrichment through enquiry and exposure to diverse symbol systems; in fact it serves to heighten these. Most significantly it prevents the curriculum from "Lock-stepping young learners into a simple mechanistic interpretation of their world" (Buescher 1979, p. 19). Buescher reflects sadly that "many of the programs appearing in local (American) schools to support the learning of gifted children seriously lack imagination, pleasure and youthful exuberance, characteristics of these children at play" (Buescher 1979, p. 19).

He cites research to support his theory of 'playful learning' as opposed to 'heavy doses of academic enrichment'. The benefits (cited on p. 18) include: increased scores on intelligence sub tests as well as indices of sequential memory, increased scores on originality in thinking, increased ability in problem-solving tasks and increased ability in verbal communication. Buescher believes that the range of playfulness with spontaneous creations and more traditional patterns (riddles, rhymes) may have a "significant impact on cognitive development and functioning" (Buescher 1979, p. 18).

There is considerably more controversy surrounding administrative techniques (acceleration, special classes, special schools) for the 'gifted' than exists about the techniques and climate suitable for the stimulation of their academic or creative skills. Yet this advice, as can be noted above, is largely couched in general terms - independent enquiry, problem solving, freedom from censure and so on are advocated. Few examples of *actual content* are available, most programmes being summarised or merely outlined. Even fewer actual examples of what the children produce are available.

3. A Description of the Writer's Programme

3.1 Introduction

As has been demonstrated earlier in this section, the nature of any special provision for children of outstanding ability or potential depends to a large extent on the initially defined outstanding characteristic (s). As the writer's point of departure was a notably high intelligence quotient score (although this score was supported by other relevant data), the programme design reflects an attempt to investigate the expression both in oral and written form of the so-called 'higher cognitive processes'. The stimuli were designed by the writer to coincide loosely with Bloom's (1956) categories of translation, interpretation, application, analysis, synthesis and evaluation and were consciously novel (although not complicated in the sense of requiring special equipment or preparation) in the hope of evoking creative responses in some of the children.

The programme was not specifically an enrichment programme but rather a series of novel 'starters' from which the children could proceed to speak and write. Although not overtly didactic, it was hoped that the programme would prove to be a 'learning experience' in that it involved considered choice of the means of expression and a sharing and evaluation of methodological procedures and results. Complete freedom as to means of response, (drawing, writing, taping), content, and form of response (prose, poetry, notes) was allowed providing flexibility and leeway for expression. The only constraint resided in the nature of the 'stimulus' itself - a necessity if a wide variety of processes was to be covered in a relatively short time.

The children, thus remained almost entirely 'producers' rather than 'consumers' operating on what Renzulli (1977) would consider to be type II activities. Despite the fact that the topics were not of their own choice,many reached a high level of abstraction, sophistication and complexity in their answers thus revealing considerable personal interest and self-inspired motivation.

The groups of high I.Q. scorers were homogeneous in that one regard only, and thus a wide diversity of responses to the relatively complex stimuli provided was to be expected as reflections of positive influences and more negative factors such as general scholastic underachievement and poor motivation as well as linguistic, behavioural, emotional or social problems. The writer's presence was largely as 'sympathetic listener' for there was no overt evaluation or grading of what was produced. Discussion, suggestion and the consideration of implications were, however, freely available.

The children were often less than happy with the flexible, open atmosphere and sought to discover what the researcher 'expected' or 'wanted' as a final product. The writer concedes that the very absence of traditional constraints may have affected the quality of the work produced. Some children failed to accept the challenge of independence and freedom of expression and would resort to copying rather than to working *with* others - another option. This apparent aversion to the exercise of freedom reflects the unfortunate habit practised by many teachers i.e. the idea that teaching implies the transferance of a rigid set of data from the teachers' heads to the pupils' (See Barnes, Britton and Rosen's research, 1974).

That the children enjoyed the programme was clear from the joyful and noisy playfulness which characterised all the sessions (all voluntarily out of school hours except for Group C), the impressive attendance rate (100% for Groups B and C - 5 sessions, 75% for Group A over 17 sessions), and the more formal response by the children and their parents to an evaluation questionnaire. What follows is a description of the programme, its nature, content and aims together with the children's general reaction and examples of their work. A summary of the programme follows.

Session I Getting to Know You Group A - Informal game. Potted biographies to identify. Groups A, B and C Questionnaire	**Session II** Translation Exercises Exercise 1 - Groups A, B and C Devising a secret code. Exercise 2 - Group A only Touch Testing-the translation of a series of textures into words.
Session III Group A only Administration of the 'New South African Group Test'.	**Session IV** 1) An Exercise in Interpretation Groups A, B and C Proverbs to interpret and match.
Session V Exercises in Application Groups A, B and C Exercise 1: Tree felling Exercise 2: The Murder Case	**Session VI** Group A only Administration of the Human Sciences Research Council English Higher Achievement Tests
Session VII An Exercise in Analysis Groups A, B and C Sequence of Events Variation in the sequence of events in the construction of certain articles- car, bicycle .	**Session VIII** An Exercise in Analysis Group A only Bridge Building Design and preparation for building a dual rail/road bridge.
Session IX An Exercise in Analysis Group A only Factory Design Choose a product then design the factory to produce it.	**Session X** An Exercise in Synthesis Group A only Abstract Art A synthesis of known concrete objects and abstract representation.
Session XI An Exercise in Synthesis Group A only The Senses A synthesis of the five senses into a single organ or creature.	**Session XII** An Exercise in Synthesis Group A only Space Adventure An synthesis of existing knowledge with the imagination to design and people another planet.
Session XIII An Exercise in Evaluation Groups A, B and C The Playlets An exercise in understanding the subjectivity of assessment.	**Sessions XIV and XV** Exercises in Evaluation Group A only Discussion based on relevant criteria on topics such as the bomb, urbanisation, population control, franchise rights and the education system.

Figure 8 : A Summary of the Writer's Programme.

1) Based on "Some peculiarities of verbal understanding in children between the ages of 9 and 11 according to Piaget".

3.2 Session 1 : Getting to Know You

Groups A, B and C

Group A responded to the questionnaire about themselves, their interests and their world with verve, sharing witty responses out aloud with the group. They had already assessed the informal atmosphere of the sessions in an introductory game described below. Group B did not have the latter advantage due to lack of time and were considerably more subdued. The questionnaire was administered to Group C by their class teacher.

The game played with Group A

This informal 'ice-breaking' activity consisted of the recognition of potted biographies typed on cards (some fictional, some authentic and based on data supplied in the parents' questionnaires). The game was played with all seated in a circle on the floor. It aimed to introduce the researcher to the children (to indicate that she cared enough about them to have discovered some of their interests beforehand) and to highlight similarities, idiosyncrasies and divergences amongst the personality traits and interests of the children themselves. Most responded well and with obvious excitement.

One child refused to read out the biography she had picked up and began the vigil of silence maintained to the end of th programme. She never once spoke to another child, recorded only once after much persuasion and would only nod or shake her head in response to the writer's questions. Yet she had no speech defect, responded well to physical affection, returned faithfully every week and was said by her parents to be thoroughly enjoying the sessions. Such children, i.e. those who deliberately conceal their potential or who are painfully reserved by nature, may be easily missed by the class teacher and may in fact require specialised therapy to encourage them to even minimal participation.

Most children, however, enjoyed interacting with one another both during the sessions and informally before and after them. During the latter, they eagerly devoured and swopped comics, read books or played chess or 'Cluedo'. The blackboard provided a creative outlet for puzzles, spelling games, 'noughts and crosses' and other doodles.

3.3 Session II : Translation Exercises

Groups A, B and C

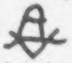
Both the activities in this session required the transposition and paraphrasing of data into a different symbolic form - in

1) from one graphic mode to another, and in
2) from the sense of touch to oral or graphic representation.

3.3.1 Exercise 1 : Secret Codes

In groups A and B (the high I.Q. children) responses were wide ranging and displayed considerable depth, ingenuity and complexity. Although Group C children enjoyed the exercise, they took longer to grasp its nature, tended to copy one another's efforts when in doubt and some exhibited irregularity in their codes (thus, of course, denying the very nature of the code itself).

Responses in Groups A and B (none of them irregular) ranged from simple transference to a numerical representation, through variations on the morse code, mixed numerically/graphic/pictorial systems, both numerical and graphic reversals, numerical sign systems, (square roots, + - =) to highly elaborate and creative artistic representations. Many devised 'codes within a code'. They translated with ease and enthusiasm, spending up to an hour and a half engaged in the process and indicated agility both in the considerable mental activity required to devise the code and in its translation. Some even returned the following week with other codes devised at home.

Those who chose a numerical code plainly saw the need to translate actual numbers in a different way. Slashes, dots, stars and spaces were used to denote punctuation and word endings. Only one child (Albert) attempted to translate in a fashion other than a one to one relationship i.e. letter for letter. He grouped two or three words under a single pictorial symbol (e.g.  = The enemy is) but was unable to explain how this system could be used consistently.

Some interesting examples of the children's codes appear below:

	1	2	3	4	5
1	A	B	C	D	E
2	F	G	H	I	J
3	K	L	M	N	O
4	P	Q	R	S	T
5	U	V	W	X	Y

Thus T = 45

Figure 9 : A Square Code, Group A (Chris).

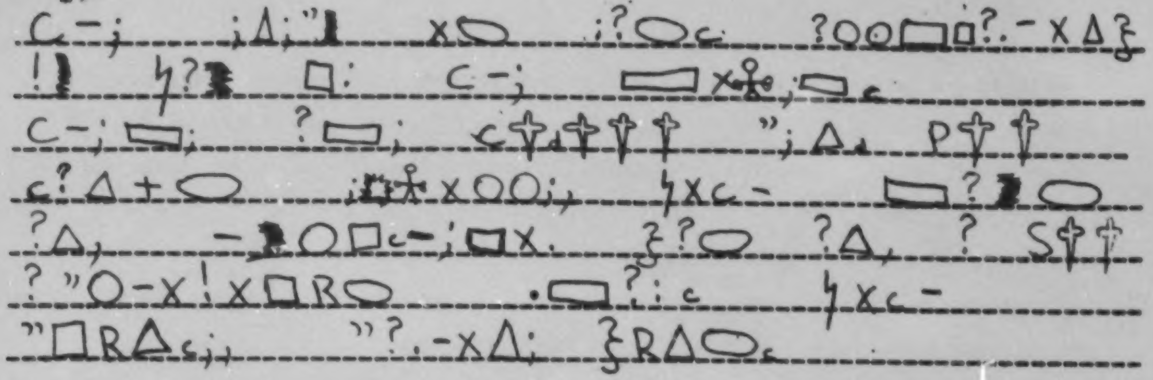


Figure 10: Group B (Angela, Jean and Melissa)

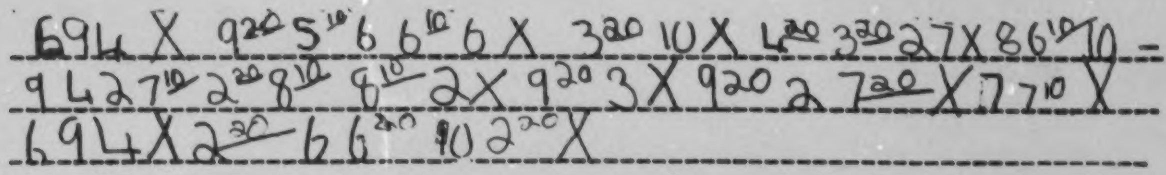


Figure 11: Group A (Don) - a numerical code proceeding from a reversal of the message.

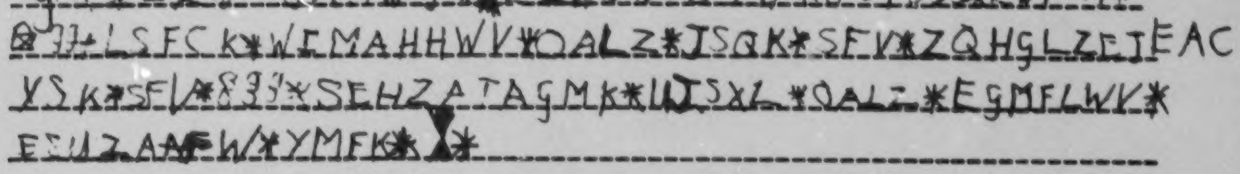


Figure 12: Group A (Sean)

3.3.2 Exercise 2: Touch Testing

Group A only

Instructions

Feel the following substances and translate the way they *feel* into words or by speaking into the tape recorder.
Items: Wood, satin, cardboard, soapy water, skin of an orange, glass.

The children were intrigued by the appearance of a wide variety of incongruous articles: wood, satin, cardboard, soapy water, oranges (which they later ate) and glasses. Part of the interest in each session was evoked (the children later told the writer) by the unexpected nature of its contents. In a discussion on the education system the children agreed that part of the boredom some felt at school was inspired by the regularity and predictability of the timetable and lesson content.

The children proceeded to poke, feel, splash and dismember the articles in an attempt to record the sense of touch in words. Some of their tape recordings are transcribed in Chapter Four. The children understood the nature of the exercise and enjoyed it. This is clearly evident from the bustling enthusiasm and the nature of their responses yet their written answers display a wide variety of styles, degree of legibility, length, grammatical correctness, fluency, originality and lexical appropriateness.

Some responses are *rushed, repetitive and unimaginative*, ("It feels hard. It feels rough. It feels lumpy" ... wood. Francis), *merely careless*, ("Wet Slippery Slimy (illegible)" ... soapy water. Lloyd), *adequate*, ("rough, coarse, can come off easily" ... wood. Sean), *somewhat studied*, ("It is not round and is not smooth at all. There are small bumps all round it and at two sides there are small knobbly bits" ... orange. Steven) and some *almost poetic*. ("Fine and delicate, slippery, smooth and brittle; slightly squeaky and sticky;

almost polished and rounded" ... glass. Alison).

Clearly very little can be said by way of generalisation about the potential intellectual ability or even relative linguistic ability of this group of superior intelligence test scorers if one takes their written expression as a point of departure. Most class teachers have little else to guide them and would most likely consider the *range* of examples above as indicative of a broad spectrum of intellectual ability and thus of intellectual potential as measured on an intelligence test.

The extent to which such written output reflects differing personality traits, true linguistic ability or habits developed at school is beyond the scope of this study. If, however, the children *have* similar intellectual potentiality *and* similarly superior language ability as measured on a standardised test (see Section Seven) it may be concluded that widely differing linguistic proficiency, correctness, interest and style may be revealed in their written output and must indeed be *expected.*

The *acceptance* of this fact is another matter altogether. Teachers may need encouragement and indeed training if they are to activate such children towards a closer correlation of linguistic endeavour with both measured intelligence and measured linguistic potential. Such large discrepancies may be the result of undifferentiated teaching for those of superior ability and a resultant measuring of language output in terms of a very 'average' mean effort. (For details of the teachers' failure to make any special provision for these children (see Section Eight).

3.4 Session V : Application Exercises

3.4.1 Exercise 1 : Tree Felling

Groups A, B and C

The tree felling exercise was tackled with enthusiasm by all three groups - with greater verve and intensity by group C if anything. The high I.Q. groups dispensed with the problem quickly, offering a wide variety of oral and written solutions - cutting it down from the top, catching the sections in a net and then poisoning the roots, using cranes, chains and helicopters and even a slow death caused by the purposeful introduction of white ants. The profusion of ideas proposed by Group C was interspersed with numerous irrelevant or ridiculous suggestions.

Generally the tone of the discussions would seem to support Jensen's (1973) findings that:

> Pupils with average ability used commands and expressed disagreement with peers to a significantly greater extent than did their superior counterparts. ... the task orientation of average subjects more often rested upon personal experiences, perceptions, and preferences which were related or unrelated to the specified content, rather than upon general, scientific, or practical concerns which tended to characterise the conversations of high ability subjects.
>
> (p. 338)

Despite the rapidity with which the high I.Q. groups dispensed with the problem, certain inconsistencies were evident, for example, a suggestion that trucks should catch branches, when there was no room for vehicles to operate. The written answers of those who took the time to write more than a simple statement ("Take a helicopter and attach a chain to the tree" Keith) display a remarkable degree of logical precision and a clear understanding of the most effective sequence of actions. Anthony writes: "Firstly chop off all the branches and bit by bit from the top of the tree start chopping, when you reach the bottom cut the trunk exactly in line with the tar and then poisen (sic) it".

Edward sums up a thought that may well have accelerated the high I.Q. group children's solution of the problem: "People shouldn't have been so stupid as to grow a tree in the middle of the road"!!

3.4.2 Exercise 2: The Murder Case

Exercise two however, presented all the children with a greater challenge. Despite the difficulty of the exercise they were taken up with the excitement of the subject matter, listened quietly while the writer read the details and then exclaimed loudly, whistled in disbelief and noisily tried to pin the foul deed on each other. Two children (Arthur and Albert) wrote at length for the only time during the programme.

The children all appeared to be experts on the seedier side of life, having no doubt read, heard or watched detective tales. In general though they proceeded to complete the report and provide random clues without careful, detailed consideration of the data already provided. Their reports are filled with gore, multiple murders or attempted ones, jealousies, poison, drugs, drink, gambling and weapons left lying near "the fatal chair" (Amanda) despite the fact that 'no murder weapon was found'. Although the cause of death had not been established "she was shot down the throat the blood stopped her breathing and she choked to death" (Albert). Other accounts contained lists of suspects and clues so jumbled as to make solution impossible. Yet others pointed so clearly to suspects as to make real consideration unnecessary. Some children cheated and pleaded 'suicide' all along. Others, failing to make sense of the data given, made up their own flippant solutions. "He put heroin in the food which made her go mad and she shot herself" (Paul). One child (Roy) showed some under=standing of what might pass for 'detective' writing by turning his hand to a Columbo saga with some thought to the structuring of the account and to arousing the reader's curiosity.

The children viewed the prospect of completing a murder report and 'solving' each other's cases with considerable excitement and enthusiasm. They began to write almost immediately obviously considering it a "creative writing" or "essay" type exercise. None of the children adopted a planned methodology or problem solving strategy. None considered whether to begin with the murderer and then provide clues or vice versa. None made lists of the given facts in order to continue a correlative account. They seemed unused to being presented with 'life-like' problems which require considerable thought and demand multi-dimensional responses. They lacked both the planned strategies for intelligent action and the patience to carry these through in concerted oral or written presentation. Such strategies are surely within their grasp and could well be worth cultivating through similar exercises in the classroom.

3.5 Session VII: Sequence of events. An exercise in analysis

Groups A, B and C

Instructions:

Think *carefully* of the sequence of events involved in the following activities. What would happen if you *changed* the order of events? Now think of how you *could* alter the sequence of events and *still* achieve a satisfactory result. You may write the answers down or record on the tape recorder after *careful* thought or draw and write detailed instructions to go with the drawing.

I Building a House
II Building a Fire
III The Assembly of a Car
IV The Assembly of a Bicycle

Sessions VII, VIII and IX required an ability to recognise and perceive the structure of various material objects or situations, i.e. to understand components together with the conditions which determine the way these fit together.

All the children were noisily excited about this activity and enjoyed the initial oral discussion concerning the sequence of events usual in the construction of these items. The high I.Q. children had no difficulty in following the more advanced terminology employed from this point on in the programme. In fact Roy defined the process involved as, "a group of events taking place one after the other". So astute were the children on this occasion that at times they corrected the researcher, substituting "sewerage" and "plumbing" for the more humble "toilet facilities" and "water works".

They were at home with fairly technical terminology and spoke of 'blueprints', 'chassis', 'foundations' and 'spirit levels'. Two of the boys (Louis and Chris) engaged in a fascinating discussion concerning the dual conceptual function of the sides of a tent - were these the walls or the roof? The session was undertaken on a remarkably abstract conceptual level. Two thirds of the children in group B and all except one of the children in group A managed to mentally manipulate the normal sequence of events to arrive at a satisfactory end product.

On the other hand, only a third of the children in group C accomplished this. Their oral discussion was constantly punctuated by irrelevant interjections, personal anecdotes and long-winded arguments. They returned constantly to the concrete - to the materials required as opposed to the sequence of their use, to the fact that 'Jopie Adam' had no plans for his house and that 'Petrocelli's' would *never* be finished1)! In general most of the children in this group were neither able to cope with the complex instructions issued nor with the cognitive manipulations required to carry them out. Beryl wrote for example, "if i put the roof on first it will fall down and squash everyone. If i put the furniture in first it might rain and everything will get wet". And Gordon wrote "If you put the bumpers on first they would fall off".

The high I.Q. children, however, used the stimulus as a point of departure for flights of fancy expressed in creative drawings and also to express some extremely novel ideas - some of course more practical than others.

Dale devised a monstrous contraption - a vast intricate framework to support a house perched on a hill with roof upside down and a railway leading to a front door perilously angled sideways.
Other innovations included the use of fire bombs to light fires, a futuristic tent house (Louis) and conveniently placed trees to support the roof while walls were built (Patrick).

Adventurous yet slightly more conventional suggestions included the use of electrical connections to hold up the rafters (Anna), proceeding from a set bicycle frame to the plan for the other fittings (James) and attaching the windows and seats to the car body before adding chassis, engine and wheels (Alison).

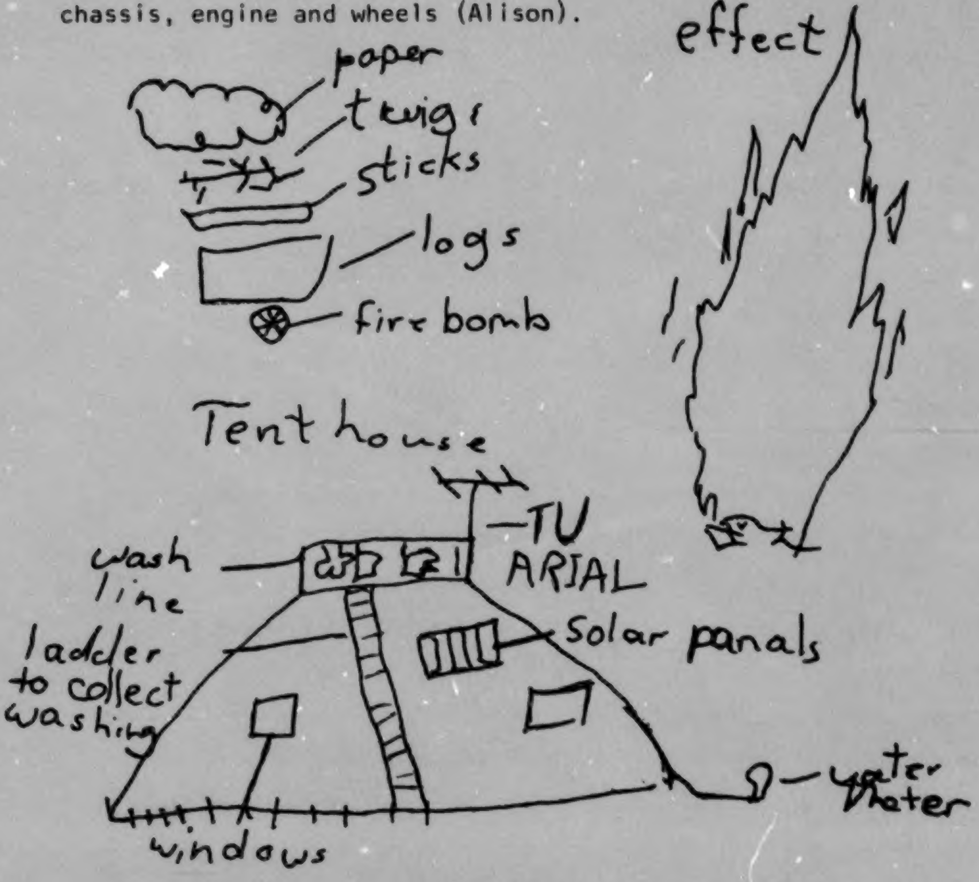

paper
twigs
sticks
logs
fire bomb
effect
Tent house
TV ARIAL
wash line
ladder to collect washing
solar panals
water heater
windows

Figure 13: Fire bombs and a futuristic tent house (Louis).

3.6 Session VIII - Bridge Building. Exercise in Analysis

Group A only

Instructions

Look at the deep gorge. A vital bridge to carry traffic and trains must be built across it. You have as much money as is required, access to any materials and to all present technological know-how. Would you design the bridge first or decide on the materials to use first? Say why. State the materials you would need and give exact details on how you would proceed towards the completion of your bridge. Choose a name for the bridge and give the reason for this choice. You may write your answer down, record it *after careful and detailed thought* or draw diagrams with written instructions.

Once again the activity was greeted with enthusiasm and it inspired a determined, concentrated effort from most of the children for an hour or more. Almost all the children chose to draw and set about doing so almost immediately.

Again there was little or no evidence of strategy planning and consideration of methodological issues. Most children ignored the first question altogether, avoiding the complex issue of the relationship between structural specifications, location and suitable materials. They simply proceeded to draw their bridge with considerable attention to the technicalities of supporting structures, scale and finer details such as the lighting and electrical installations. Lists of the materials required and the sequence in construction events were much in evidence but the children failed to consider answers to the 'Why' and 'What if'? questions. The children seemed to need practice in considering multiple possibilities and the implications which would follow from these. The drawings were ingenious, inventive, some probably even practical, yet they reflected largely concrete thinking: this is how I woulddo it and this is what I would use, or vice versa. Far more effort was generally expended on the drawing than on either the content or neatness of the writing or speaking.

3.7 Session IX - Factory Design. An Exercise in Analysis

Group A only

The exercise required the planning of a large factory or company - a consideration of the structure of the building, the machinery required and the roles and functions of the necessary personnel. Emphasis was once again placed on the novelty of the product and of the procedures necessary to produce it. The task was again received with considerable excitement although some children found difficulty in getting started on what was clearly a large and complex undertaking. All the children felt a need to express themselves by drawings accompanied by explanatory notes. None found difficulty in following instructions and once again there was no need for additional clarification of terms. (Louis distinguished a factory "which makes things" from a company "which does things").

Few of the children managed, in the time available, to consider the nature and role of the personnel involved and some were more concerned with the ingenious nature of their products than with an analysis of the procedures required to produce them: for example a pen with automatic filler, a miniature T.V., watch and compass (Charles), a watch incorporating compass, thermometer, calendar, radio, coloured lights and strap doubling as a magnet (Lloyd). Two children produced complicated machinery to manufacture clearly nonsensical products (Don - invisible gas and a golden egg layer and Louis - a carrot perfume). Other more viable yet equally unusual ideas included a fast food production and service outlet (Rosemary), a multi-level spaceship production system (Albert) and a chocolate factory (Arthur).

The drawings were, in general, detailed and carefully executed yet the accompanying writing wasoften careless, both graphically and gramatically. The above examples draw inspiration largely from what the children have obviously seen, heard or read - the recent flood of multipurpose electronic equipment, space/science-fiction adventures, and Dahl's stories.

Once again the variety of response, its quality, quantity, practicability and novelty, is remarkable and may strengthen the argument for highly specialised and individual guiding techniques for children of high potential. For example, two children particularly tied to the factual were encouraged by the writer to be more imaginative; Charles first produced a very sterile, box-like furniture factory but after some encouragement invented the 'multi-media pen' described above whilst Nicholas who would only read factual data and avoided all fiction, refused at first even to attempt to describe the machinery required to produce a calculator as he didn't know what it *actually* looked like. Yet upon some further encouragement, he produced a detailed and complex drawing which he obviously enjoyed doing.

3.8 Session X: Abstract Art. An Exercise in Synthesis

Group A only

A set of nine black and white photocopies of abstract art[1)] were presented to the children in order to gauge their initial oral reaction and then expression in a written piece. This was one of the few occasions on which the children were asked to write and were not permitted a free range of expression modes, although the nature and style of the writing was, of course, not stipulated. The writer's intention in this regard was to obtain at least some written specimens from the children who generally preferred to choose other forms of expression.

It was hoped that the presentation of these unusual stimuli would generate new ideas, as a result of a comparison and synthesis of known concrete materials with the abstract representation provided.

---

1) The works of art displayed were :

1. Stuart Davis. Salt Shaker.
2. Robert Hudson. Medicine Ball.
3. André Mason. Summer Frolic.
4. Joan Miro. Maternity.
6. Francis Picara. Amorous Display.
7. Paul Klee. The Harbor.
8. Man Ray. Promenade,
9. Roger de la Fresnaya. The Conquest of the Air.

The children greeted the display with enjoyment bordering on hilarity amidst exclamations of 'Jeepers' and 'Wow'. They proceeded immediately to attempt to reconcile the unknown before them with previous experience, as if trying to decipher what the artist had tried (*unsuccessfully they thought)* to represent. All these suggestions were described in terms of known concrete objects. Thus the 'circle' in Miro's'Maternity'was described variously as 'a frisby', 'a yo-yo', 'an eye' - and later more adventurously was seen as, 'a kite flying a spider', 'parts of a clock', 'points of a compass', and 'looking down a microscope'. All these suggestions were shouted out with gusto amid instructions to 'turn it upside down', 'turn it sideways' in order to comprehend better.

Hudson's'Medicine Ball'evoked some interesting oral interpretations including comments such as; 'The world is too old, its cracking and the sea is falling out' and 'the world washed and hung up to dry'. In general oral interpretations were global and novel but not indicative of much abstraction or symbolic understanding.

Prior to the commencement of the written work, some children (Anne and James) were concerned about their inability to spell and about the required length (Don). Others took time to begin writing whilst Patrick (see detailed case study pp. 131 ff.) wrote nothing at all, resorting to completing a puzzle on the shelf.

Once again, the writing was highly individual both in content and style and reflected both interests and personality traits; Chris's preoccupation with numbers was clear: "The Pugmie babies were between ninety and a hundred-and-twenty-five metres tall, whereas the adult males could be anything between nine hundred and one-thousand-one-hundred metres tall and weigh up to seven-thousand-five-hundred kilograms" as was Nicholas' continual and absorbing fascination for facts, "The origin of writing was in Egypt, strange shapes and strokes. Many were similar shapes but none of us know what they mean".

Other pieces described the pictures objectively, used them as a point of departure for fantasy, dialogue, poetry, captions and brief cameos. The writing varied not only in form but in quality, from poorly structured slang, inept half-rhyming verse to slick, polished, compact expression. The selection below will serve to illustrate this diversity.

The Day the World was Destroyed

The day was peaceful enough. People in the small village of Leads were still in a primitive way of life. Suddenly a prophet came running up shouting with all his might. "The world is ending, the world is ending". The people looked at him in scorn. There was something else he said. He said only the apple trees would survive for a while. Suddenly the ground shook and volcanic gas rose around them. Then there was no more ....

Meanwhile 2 000 000 miles away in New York panic was with the people. Skyscrapers shook and rumbled. Buildings crumbled away to be nothing but dust. In the midst of destruction two apple trees grew only to be destroyed. Was this strange? Yes, because no plants grew in New York! And how do I know when everyone was killed, well ......?

Rose (Picture 7)

I saw maze of different ways,
And a ball burning in a blaze,
Candlesticks on a pole,
And also a great big hole,
Also letters large and small,
And a ball on the wall,
I saw a curious stack of hay,
That never say the light of day,
I definitely saw all of these,
While I was exploring the seven seas.

Charles (Picture 6)

The Praying Mantis sits waiting, waiting for its prey,
Hungry, hungry even starving all day.
Then slowly slowly a beetle crawls by,
and then a very fat fly.
Slowly the Praying Mantis crawls closer, closer
then he reaches out both his hands
then buzz buzz sluurp ssluurrp!
Look at him a beetle head
sticking out of his mouth
and a fly's wing out of
it as well
He flew off no longer hungry
and ceased waiting, waiting for his prey.
The only trace of him being there
was a big puddle of blood.

Roy (Picture 3)

Wind. Whirling around and throwing dust up. A black cloud approaches at a speed beyond belief. Suddenly, it descends and is seen to be a swarm of locusts. Evil beaks destroy the country side. The air is filled with the sound of rustling wings. Screams of anger and help= lessness fill the air. The villagers are powerless. Then, as suddenly as they had come, the swarm was gone. The single mind flew on, to wreak devestation somewhere else.

Steven (Picture 3)

A thriving city, pumping foul odours into the air.
One bomb , one explosion, and it was devoid of live.

Centuries later the first plant crept out between
the ruins. Life began again.

Steven (Picture 7)

Shapes. Meaningless as a child's scribbles.
But somewhere, there is a meaning. Don't
ask me where!

Steven (Picture 6)

The first shape on this picture I think is a person. It is the left side of a person. It has half a head, half a body, one leg, one arm, one ear, one eye, half a nose and one foot. The person is throwing a boomarang. He carved the shape out of wood and is trying them out. The second figure is the bottom half of a person. It has a body and two legs. It has no legs. It has no head. It has no feet or toes. At the bottom of the legs it is pointed. It has got a line down the middle of the figure. The third figure looks like part of a body with one leg. It has got a funny shaped neck. There is a boomerang by its feet.

Francis (Picture 8)

A COUPLE OF DRUNKIES meeting in an old ruin for a card game. The weather is very misty and the full moon just manages to peep over part of the demolish wall. The reason for their meeting is because one of the Drunk thugs has just swiped a bit of loot off his mother inlaw and decides he wants to double it. But of course he is not even half way through when he is already owing everything he owns including his tin shack.

Don (Picture 9)

A disco-dancing lesson for deformed people
at Arthur Murray's dance school.

Johnathan (Picture 8)

A peanut processing or wire making machine
in a dingy makeshift factory.

Johnathan (Picture 5)

3.9 Session XI - The Senses. Exercise in Synthesis

Group A Only

The children were provided with some factual data on hearing, touch and smell and were then asked to proceed beyond the data by synthesising the elements of each sense into an organ, or creature, encompasing all five senses. They were asked to describe it, consider its functioning and its advantages and/or disadvantages.

They listened carefully to the passages provided and then experimented loudly on each other, testing each other's nerve reactions to pressure and examining recently extracted hair follicles. They were excited by the novelty of considering smell as capable of evoking visual images and related some unusual personal experiences including a description of a man who picked up radio waves through a tooth filling.

Output once again varied considerably in quality and quantity. Some children deviated from the stated exercise to write poems or stories, knowing themselves free to express reaction to the stimuli in any way.

Some examples of the children's work follow. They ranged from nonsense poems, through complex drawings and cartoons, to stories and carefully considered rhyming couplets (and others of lesser merit!).

Two children both with notably higher non-verbal than verbal scores produced only two lines during the hour and a half session. In contrast Chris was absorbed in a lengthly rhyming epic of considerable merit.

Sometimes when you drinck you chock and
the drinck comes out of your nose.

Patrick

Your hear with you ear
sometimes secrets
sometimes fear
You smell with your nose

Owen

Our tongue tastes fun
Like cream-cakes and buns.
But its not always like this
When we taste our dislikes, like fish!

We hear frolicking tunes
Sweet music in the afternoons.
But then the music is destroyed
By loud shouts and noises.

We smell flowers in bloom
As we wander away from the gloom
From the gloom and fog of the city.
With its streets that are gritty.

Rose

THE FIVE SENSES

The five senses, sight and smell,
Hearing, tasting, touch as well,
Useful things that help you know.
How the humans come or go,
If they're at work or at play
Eating, sleeping, night or day
Touch, an organ in your hair,
arms and legs or anywhere;
It sends a shock up to the brain,
if it feels a drop of rain
a bump on the head, you kicking a ball,
a rap on the shin, anything at all,
Sight; a sense which helps you see.
Flight of a bird, the shapes in a tree
watching a rugby match, a broken door
If you want to see, there're things galore.
Smell recall those happy times,
when you listened to nursery rhymes
near the blosooms, under the tree,
things which are now impossible to see
Hearing, sound which is loud or soft.
wingbeats of birds which are high aloft
sound of the waterfall falling on the rock
hearing the ticking of the grandfather clock.
Inland they're noisy, on the seashore,
sound in the towns is getting more and more
Tasting; the last sense of the five
you taste the honey from the bee-hive
tasting the sweets loved by all kids
food that's in bottles, closed with lids
Now you know our senses five,
by which we can live and thrive.

Chris

Your ears make your hear
Sometimes sounds of fear
Your eyes make you see
You can see your hair and if anything is in it like a flea.
Your nose gives you a sense of smell
and if you get any strong gasses in it it will
ring like a bell.
You feel with your hand
Hands like the feel of sand
Your tongue gives you taste
If you stick a sweet in your mouth you do it with haste
One of these days an organ will have all of
these but only in the future
But I dont think it will suit you
Maybe people will have it one of these days
Like long ago they discovered maize.

James

(See also Alison's drawing on p. 103).

3.10 Session XII: Space Adventure. Exercise in Synthesis

Group A only

The children were asked to synthesise their imaginations with their existing knowledge of space and other planets in order to invent, name and then describe a fictional planet and its inhabitants. The initial oral discussion was punctuated with excitement and novel ideas. Speculation was rife; what effect would a change in shape - triangular flat, square - have on movement, what would be the effect of mist rather than grass, a domed 'compassphere' for the atmosphere or air supplied through radio waves from earth?

Of all the sessions this one seemed most easily to evoke the children's propensity for playing with words and language. Much of the verse resembles Edward Lear's nonsense poetry - child fantasy yet, in this case, often interspersed with an adult interest in science, logic and

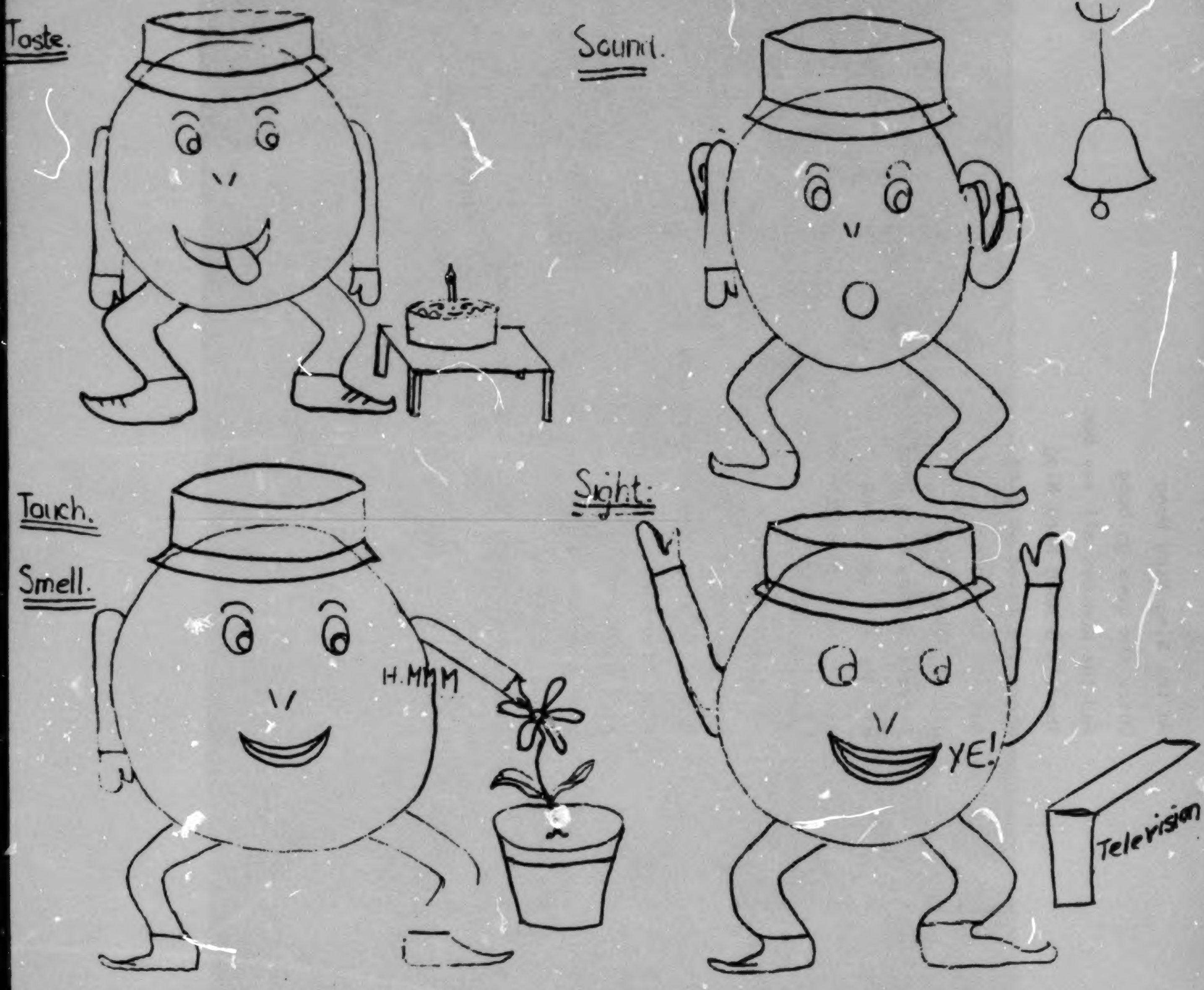

Taste.
Sound.
Touch.
Smell.
H.MMM
Sight:
YE!
Television

Figure 14 : Alison's Sense Cartoons.

numbers. Special delight was taken in long, complicated (yet not quite unpronounceable) names.

On the Ning Nang Nong
Where the cows go bong
And the monkeys all say boo
There's a Nong Nang Ning
Where the trees go ping
And the tea-pots
Jibber Jabber Joo
There's a Nong Ning Nang
all the mice go along
And its hard to catch 'em
when they do
So it's Ning Nang Nong
Cows go bong
Nong Nang Ning the trees go ping
Nong Ning Nang
Mice go clang
What a noisy
Place to belong
is the Ning Nang, Ning Nang, Nong Nong!!

Jonathan

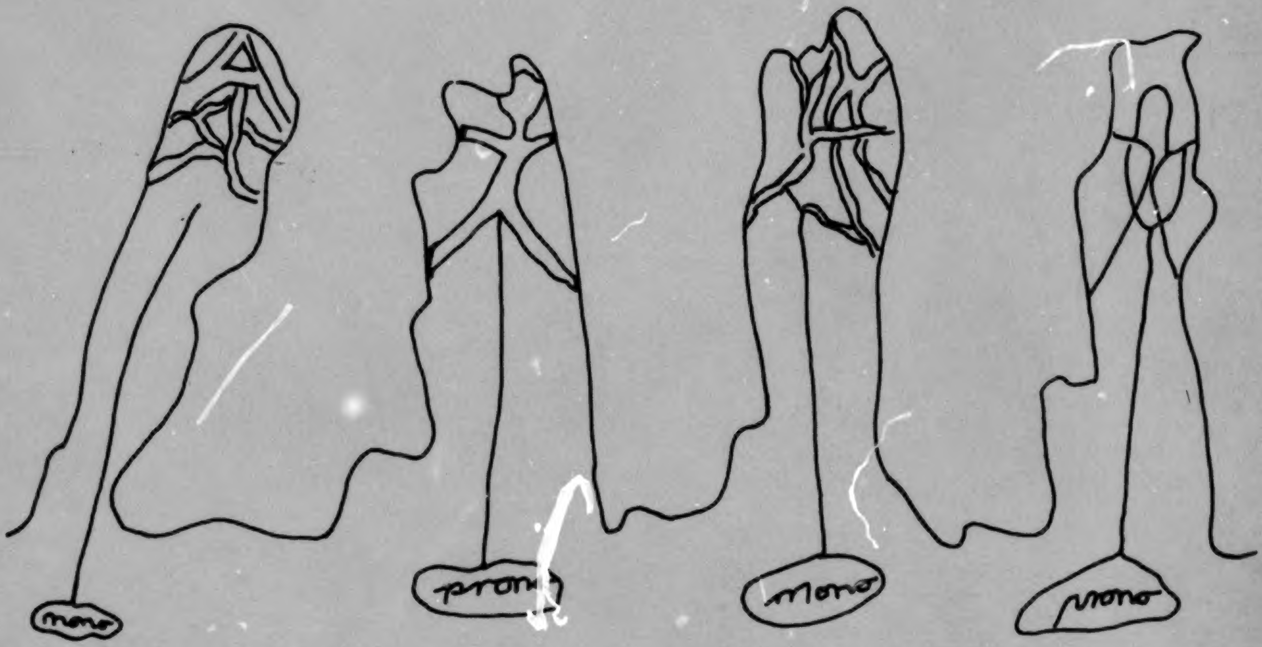
PRONOMONOSONOLONOBONG

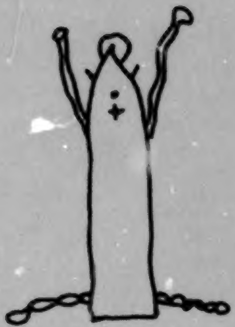
What's its name?
Pronomonosonolonobong
What a name
What a song

Mono is the animal
Prono is the plant
The only living organ
On the whole planet

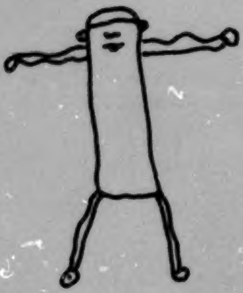
Prono eats the earth
Mono eats Prono
The planet's big, very big
For short, it's called bono

Sean





1.

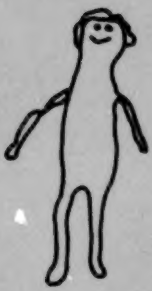


2.

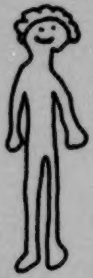
the people of
planet
Eirpion
are
called
by
name
which
is (or are)
very
strange
the
name
of
the
people
is

XPSTPRAMROPESTENRETEMESRAMPOMPlzenorygowobbybongterwongbelontsrapemremopongtorgkiremetsemaothismemetomgamemtomotemzemotz,

which
means
biotashamom.
and with
continued
practice
the
people
of
planet
Eirpion
can
disguise
themselves
as
human-beings



3.



4.

Dale

Subsequent sessions to complete the programme were all expressed orally. They encompassed the highest level of cognitive endeavour - namely evaluation on the basis of some worthwhile criteria. Topics discussed or examined included the subjectivity of assessment, increasing urbanisation, population control, education, franchise rights, the freedom/responsibility dialectic and the controversy of the bomb. An account of the children's responses to the largely adult, abstract and complex themes occurs in the following section.

What remains to be done in the present section is to reflect the opinions of the children and their parents on the value of the programme.

4. Evaluation of the Programme

The children in Group A were asked to complete a questionnaire stating whether they had liked the workshop sessions 'very much', 'fairly well' or 'not at all'. They were requested to name the two things they had liked best, two they had not liked and two that they could do now but not previously. They were asked to suggest improvements and to state the degree to which the programme had helped them with their schoolwork - 'a lot', 'some help', 'none at all'. Their parents (and the Group B parents) were requested to fill in a similar form with the addition of a question asking whether they would like their child to participate in such a programme again.

In general both children and parents were complimentary. This was gratifying but even more revealing were some carefully considered stated contrasts between the nature of the programme and ordinary school work. Fifty-seven per cent of Group A enjoyed the sessions very much and 43% fairly well. Forty-three per cent stated that it had helped with their schoolwork a lot, 40% said it had offered some help and 17% said it had been none at all. The reasons supplied by the last mentioned 17% were - "because we don't do complicated class=

work" (Paul), "most of the topics were for boys" (Anne), "we don't do anything like this at school, school is boring in comparison" (Louis), "we don't do architecture at school"!! (Chris).

Only six children made suggestions for improvement - "it could be more difficult", (Don), "I'd like to do some geography - draw maps", (Francis), "I'd like to come more often" (Dale) "I'd rather come in the afternoons after school than on Saturday morning" (Edward), "we need more information before we plan a factory" (Chris) and "I found difficulty deciding what to do" (Alison).

There appeared to be little pattern to the responses concerning likes and dislikes within the programme (very few children disliked anything) and the responses seemed to be largely a matter of personal preference rather than a display of group preference for certain items.

More valuable were some of the more specific comments made by the children concerning what they'd gained. Arthur stated that he had learnt to appreciate different tastes, that his expression in written work had improved and that the programme provided greater variety, interest and more time to write than at school because there "we just copy from books". Johnathan expressed his appreciation for all the sessions which were unlike school as, there, one was 'hounded' to get on with something. He felt better able to cope, said that his reading had improved and that he was reading more. Steven enjoyed 'the round about way of learning', the unusual topics for written expression (not like the usual 'a picnic'), the fact that he was not told how to write nor did it have to be neat. He felt himself better able to express things on tape and generally enjoyed the sessions because they were so different - "we do the same work over and over at school". Rose, Steven's sister, also enjoyed the novel stimuli commenting too on the social aspect - getting to know and understand new people. She found a more competitive atmosphere than existed at school, she wrote more and produced more ideas to find solutions. It made her think, "at school we just add on to what the teacher says".

Roy felt that he could "think better" and "concentrate harder". Sean expressed similar sentiments adding that he had gained self-confidence, was more self-assured in the expression of his own opinion, had learnt how to evaluate and assess and liked the small group where he was accorded a great deal of attention yet was free to do as he pleased. Don felt that the sessions had stimulated his imagination and led him both to notice things not previously seen and to see other things differently. Charles enjoyed the excitement of not knowing what he'd do each week - "at school we always know what we'll be doing". Dale was glad to have "something to do on Saturday mornings" and learnt from the other children and their ideas.

Other children expressed sentiments similar to those stated above. The reaction was overwhelmingly positive suggesting approval both for the nature of the material and the prevailing atmosphere. The programme clearly 'worked' for the children. Delighted as the writer is with such a response, it is necessary to dispel a feeling of self-satisfaction through careful attention to the nature and quality of what the children *actually produced* and what they *actually feel* about their schools. This matter will be handled in the overview of this chapter and again later in the study.

All except one of the parents of children in both group A and B said that they would like their child to participate in a similar programme in the future (the exception was a Jewish child who had doubts about attending on a Saturday). Their enthusiasm stemmed from general impressions such as that the course was stimulating, interesting, exciting, challenging and increased awareness of both the environment and of language itself. They said that the children enjoyed meeting and working with others of similar ability yet different in age.

The group discussions were said to have increased self-confidence and the ability to view the world from different angles. Other comments included note of the freedom of expression permitted and the open and friendly atmosphere.

Some parents were more specific, noting improved concentration (Roy and Patrick), articulation, enthusiasm for learning (Charles) better poetry writing (Francis) and even "improvement in all subjects this term" (Lloyd).

Several parents commented on the variety of content included and the methods of approach. Chris' father, a paediatrician, complimented the promotion of original thought and individuality although he suggested smaller groups. Angela's parents felt that she had formed new ways of solving problems. One parent even commented that the children (Steven and Rose) were "treated as intelligent human beings" as if this were seldom the case.

Children with difficulties in particular areas also seemed to have been helped[1] by the programme (at least to some extent). Alison, both intellectually and artistically gifted and a loner with no friends, was said to have gained confidence during the in-depth discussions because others accepted her ideas and because, "discussions were not as formal, tense and aggressive as school discussions - altogether more spontaneous". Thus "tension was eased in the family as a result of the child mixing 'happily' with others".

Louis' mother, an occupational therapist, wrote; "I think his written expression has become freer. He was stuck at the concrete level and is now able to give rein to his imagination on paper as well as verbally". Graham was said to have been made "excited - usually he mopes around bad tempered. It gave him a sense of importance and he enjoyed the freedom to do as he wished". Lloyd was said to be able to "verbalise thoughts much better" and to display "an improved ability to rationalise and solve problems".

The extent to which these improvements can be totally or even partially attributable to the programme or to other incidental contributing factors cannot be accurately judged in an 'uncontrolled' situation such as this. However, what can be said, (and what may, in the final

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1. Three children (Patrick, Frank and Roger) were referred to other agencies for specialist attention.

analysis be more significant anyway) is that the children did enjoy both the content of the programme and the way it was presented, clearly saw it as different from the ordinary school programme and as having certain desirable effects on their thinking and approach to life.

The parents confirmed this positive impression. That several parents wished to have been informed more fully of the content and aims of the course further confirmed their interest. That in fact they had to judge *merely* on what the children *reported* provides further credibility for an overall positive impression of the programme and its benefits.

5. Overview

The programme described, designed especially for a group of high I.Q. scorers in the 8 to 11 year old age group, makes no claim of completeness or inclusiveness. It would need some considerable adaptation, both in breadth and depth, before becoming workable in the ordinary classroom. What is of value, however, are the insights gleaned from what the children learnt and produced (or failed to learn, display and produce) and also what both children and parents considered valuable in the programme.

All the children in groups A and B are 'bright' and 'have potential'. That they learnt something, were relaxed, benefited in some ways, shared experiences, enjoyed themselves, produced something sometimes and were not bored can be stated with a fair degree of certainty. Their parents largely indicated agreement with this. It would thus seem beneficial to expose such children to the novel, the complex and the difficult even if the stimuli provided were not of the children's choosing (some wereso little motivated as to be unlikely to express a choice anyway, others would have so many alternatives that it would be difficult to choose).

What has also been learnt is that not all children who *are* bright and *do* have potential are good producers in the oral and written expressive sphere. Rosemary was not encouraged to talk, nor Patrick and Owen to write much even in the face of admitted enjoyment, excitement and relaxation. Obviously they need special help in these areas. It might, however, be necessary to concede that it is not really so bad to be predominantly 'a consumer'. These children should probably not be denied special facilities (compare Renzulli's (1977) opinion) for they too have obtained equally valid - if less obvious - benefits from the programme.

Clearly all the children in groups A and B are capable of advanced and highly individualised cognitive strategies. This is clear from their informal chatter, some of their writing and some of their tape recordings. They solved complex problems, proposed hypotheses, evaluated, deduced, compared, interpreted, translated, analysed, synthesised and evaluated on the basis of given data. However, when they exercised these abilities in order to achieve a given result, they did so in a haphazard, inconsistent and spontaneous manner. They were clearly little used to *practising*[1] these abilities and had little idea how to plan strategies and methods to gain maximum efficiency. They lacked too, probably through insufficient practice and challenge, the ability to sustain a concentrated and directed effort. They manipulated the abstract and the symbolic almost as if by chance so that an observer glimpses rather than truly *perceives* and *notices* this.

Such spontaneous rather than concerted effort may indeed occur as a result of the fact that their attention was diverted elsewhere. They were concerned (often to the exclusion of all other considerations) with a stipulated length or style and with correctness and 'acceptability'. They often needed merely to 'get it done' and executed their work in an obvious, banal, trite or slapdash manner with clear inattention to depth. They need *exercise* in the skills built into the programme and *exercise* in the discipline required to execute them

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1. These data are substantiated by the findings of the Lancaster Curriculum Development Centre Project. Children failed to produce the in-depth writing anticipated and solutions were oversimplified in order to produce answers quickly.

in creative, logical and insightful oral and written expression. That some could already do this fairly well must be granted: that *all* could make considerable strides towards improvement was equally clear.

It is probable that in the classrooms (many of them heterogeneously constituted) real challenge is largely absent - too little is accepted too easily by the children themselves, their peers and especially their teachers. It is easy, even in a novel and challenging situation, to resort to mediocrity. The children need to learn (and be specifically taught) to accept full responsibility for the standard of the work they produce and for considered choice of the manner of its execution. They need to learn what constitutes mediocre effort - incorrect structure, slapdash expression, banal statements, rehashing - to evaluate and see it themselves and accept the considered opinion of others.

Buescher (1979) has stated some dramatic improvements in bright children as a result of the sort of playful, (often boisterous) programme devised by the researcher. That the children possess flexible and adept mental functioning is clear. That they are unused to manipulating multiple and complex possibilities and considering implications *prior* to application is equally clear. Yet still the children produced some remarkable work, remarkable chiefly in its variety (from child to child *and* from session to session) of style, graphic proficiency, originality and appropriateness - a full range from the obviously poor to the brilliant and sparkling.

If then, *even half* of the benefits said by both the children and the parents to have resulted from the programme, were *in fact* due to it, some considerable impact has been made on the lives and thinking of these youngsters (or at least some of them). The results are extremely gratifying. A great deal of effort is required to initiate and sustain such a programme but it is unlikely that such dramatic and speedy results could be obtained with children other than those with considerable intellectual potential (often *untapped* and *unrecognised*). It is a joy many teachers have yet to discover.

SECTION SEVEN

AN ANALYSIS OF THE ORAL AND WRITTEN PROFICIENCY OF SOME HIGH I.Q. PRIMARY SCHOOL CHILDREN

1. Introduction

There is some supportive evidence for the trends in oral and written expression noted by the writer during the course of the programme used. The present section serves to summarise these but then to go further and propose certain more detailed possible categorisations of the high I.Q. children's written and oral responses. These proposals are based on an analysis of the children's actual linguistic output together with supportive evidence.

2. SUPPORTIVE EVIDENCE

Gowan and Demos (1964) and Oléron (1977) make note of the likelihood of a noticeable variation in linguistic development between individuals. Gowan and Demos (1964) refer to the linguistic development and output from children of high intellectual ability as "varied and uneven", ranging from "above average to somewhat below average" (p. 147). They note a superiority in impromptu oral monologue (often as a result of high reading ability and favourable socio-economic background) yet less impressive performance in discussion, prepared oral work and "the mechanical aspects of written language" (p. 147) (this is also noted in the Terman, Baldwin and Bronson study quoted in Dunn 1973, p. 44).

Both Gowan and Demos (1964, p. 22) and Bridges (1975, p. 22) note the absence of interest or motivation among subjects to express themselves in any terms beyond the merely adequate or commonplace. The expressions are often poorly spelt as well (Gallagher 1975, p. 3, citing Terman 1951).

Yet, as noted earlier in Section Five, certain types of superior linguistic performance are often included as basic characteristics of children possessing superior intellectual potential - use of more advanced vocabulary, more complex sentences or the early accomplishment of language milestones and reading proficiency for example [1], (Fliegler 1961, p. 184, and Gowan and Demos 1964, p. 52).

Early reading skills have special significance as regards both other language areas [2] and scholastic performance. Thus, McNeil's statement (in Cashdan and Grugeon 1972) that by four years the average child will have "mastered very nearly the entire complex and abstract structure of the English language" (p. 145) may need adjustment for many children of high intellectual ability to state 'and will be able to read it as well'. The implications of learning to read are admirably stressed by Donaldson (1978). She states that far from the mere mastery of a mechanical skill, learning to read offers, "much more favourable opportunities for becoming aware of language in its own right than ... earlier encounters with the spoken word are likely to have done" (p. 91). Those children who are able to read before school going age have a tremendous advantage over the average child, many of whom, "come to school not even aware that separate words exist" (p. 91). Donaldson also quotes the work of Fox and Routh which shows that the average child, by the age of four, is "not capable of breaking speech up into progressively smaller 'little bits' if encouraged to do so; and that of Jess Reid which shows that, "many five-year-olds have very confused notions of what is meant by the word 'word' (p. 91).

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[1] For a summary of data provided by some of the parents of the children in the writer's study groups concerning the Language Development of children, see figure 15, p. 116).

[2] Talk is basic and central yet both writing and talking may be influenced by reading superior in technical excellence, breadth and depth.

First words spoken before nine months	Johnathan, Rose, Ernest, Francis, Arthur	Sentences spoken before eighteen months	Anne, Arthur, Johnathan, Nicholas, Edward, Graham, Rosemary, Louis
First words spoken between nine and eleven months	Steven, Roy, Nicholas, Sean, Don, Dale, Edward, Chris, Graham, Jill, Rosemary	Sentences spoken at the average age	Paul, Steven, Rose, Roy, Sean, Chris, Alison, Anna, Malcolm, Keith, Ernest, Hugh, Jill
First words spoken at the average age	Alison, Malcolm, Paul	Late Talkers	Lloyd, Owen
First words spoken later than average	Melissa, Hugh, Charles, Lloyd, Anna, Keith		

Speech defects	Melissa, Graham, Frank (lisp) Arthur (very rapid speech)
Children who did not speak freely to adults not well known	Anne, Arthur, Steven, Albert, Nicholas, Charles, Owen, Edward, Rosemary, Angela, Ernest, Jill, Laura, Melissa,
Children who did not ask many questions	Paul, Lloyd
Children able to express abstract ideas between the ages of twenty-four and forty-two months	Anne, Sean, Owen, Chris, Don, Ernest
Children who taught themselves to read prior to school entry	Johnathan, Steven, Rose, Roy, Nicholas, Sean, Francis, Dale, Owen, Frank, Louis, Chris, Alison, Angela, Hugh, Laura

Figure 15 : Data provided by *some* parents concerning Language Development of Children in the High I.Q. Groups.

Donaldson (1978) further notes that in some homes "awareness of the spoken word is greatly encouraged" (p. 91). In these homes parents "talk *about* words to their children, play word games with them and so on" (p. 91).

In fact 79% of the parents of children in the writer's high I.Q. group forwarded and fostered intellectual skills (including language skills) at pre-school level. But more than this, they displayed considerable interest in enjoying language activities with their children and in ensuring that the latter used correct grammatical structure, pronunciation and sequence, a suitable level of vocabulary and socially acceptable speech. Seventy-nine per cent of parents of children in the high I.Q. groups played word games with their children (Patrick, Francis, James, Paul, Arthur, Roy, Nicholas excepted) and 84% stated that the children enjoyed and took part in puns, riddles, rhymes, nonsense rhymes, parodies and spelling games (Arthur, Nicholas, Jean excepted). All the parents paid attention to correct speech - 74% always corrected errors and 26% did so occasionally. Ninety-seven per cent of the children realised the value of asking questions and 71% were said by their parents to have started this trend almost as soon as they could speak. Most children were said to have exhibited a general curiosity and asked questions beginning with 'what', 'why',. 'how' and 'when'. Some displayed their particular interests through the nature of their questions, for example Joan was preoccupied with word meanings, Owen with how things worked and Chris with mathematics especially concepts such as the fastest and longest. Sixty-three per cent of the children were said by their parents to speak freely and openly to adults not well known and yet only 55% of them were said to write stories, poems or letters at home of their own accord.

When asked about improvements that they would like to see made in language teaching in school, however, 47% of the parents failed to respond. The others listed as cause for concern a lack of suitably advanced spelling and reading programmes, the repetitious content of reading texts, inattention to grammar and pronunciation, insufficient variety, challenge, interest and freedom of expression and a need for less learning and more attention to style and expression than to neatness and standardisation.

Jensen (1973) has recently drawn attention to the relationship of language performance to intellectual rather than sociological factors. She considered casual and careful oral language fluency, grammatical control and function in a group of randomly selected and paired boys and girls - 80 children in the fifth grade. She reported that "superior subjects spoke a larger number of words in both language styles, displayed more diversified vocabularies and exhibited a lower incidence of language mazes. Grammatical control findings also indicated a consistent superiority of the high ability sub-group. Average subjects spoke in significantly shorter communication units and clauses than did superior subjects. A lower incidence of subordination, less variation in structural patterning, and a higher incidence of non-standard usage typified the speech of average subjects" (p. 338). Jensen's work cited above is the only study located by the writer which provides a more detailed and in-depth analysis of the *language* of children with superior potential, than the previously cited general descriptions of the linguistic advantages or disadvantages they are said to possess. She expressed surprise that, "with the possible exception of a growing body of literature related to able readers and creative expression, the language of the gifted child has received little attention. This neglect is perplexing when one considers the relationship between language and intellectual performance, as well as the demands placed by society on an individual's ability to express concepts symbolically through language" (p. 337).

The writer hopes that some of the proposals which follow concerning the oral and written expression of a group of high I.Q. primary school children may serve to counteract some of the above stated neglect, and thus contribute a more realistic picture of the actual linguistic output of these children. Hopefully the work may enable teachers to deal more proficiently with shortcomings and also recognise superior linguistic potential disguised by poor spelling, hasty expression or inadequate mechanical skills.

3. ORAL PROFICIENCY

3.1 Introduction

There seems to be some evidence to suggest that home background plays some part in a child's tendency to analyse words spoken to him and to think before he speaks. Donaldson (1978) notes that "children from more privileged backgrounds are more likely to pay scrupulous attention to the words of the question, reflecting on them, analysing them before answering" (p. 89). Bernstein (1973) notes that "middle-class children as a whole were found to have more genuine hesitation pauses1) at within-clause locations which suggested an inclination to pause for the selection of individual lexical items" (p. 248). Despite the rather studied approach to the spoken word on the part of middle-class children (such as those in the high I.Q. study groups) suggested by the above quotations, Bridges (1969) noted a great propensity for and enjoyment of speech, discussion and debate in his high ability groups, so much so that "by the end of the year, discussion was taking up half the afternoon" (p. 143). He goes so far as to describe some of the children as being afflicted by the 'disease' of compulsive talking. They talked to themselves expressing a seemingly conscious need accompanied very often by restless movement. Their wit was predominantly verbal. Bridges (1969) was surprised by the depth of thought and by the thought links evidenced through the children's speech. Although there were children more fluent on paper than in speech, he found their written work generally disappointing. The children preferred discussion but, seemingly as a result of inadequate practice in the classroom, were unable to see others' point of view despite a certain "emphatic understanding in advance of their years" (Bridges 1969, p. 80).

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1) Although as Jackson (in Cosin 1977) points out, no one knows what actually happens in the pauses.

3.2 Findings in the Present Writer's High I.Q. Study Group

The programme offered a wide range of opportunities for oral expression both in the form of unbridled general conversation and comment and in the form of more formal discussion and tape recording. In fact the oral 'output' ranged from childish slapstick classroom skits and 'Herbie' jokes, through flights of the imagination, the planning and designing of factories and bridges to serious discussions on topics such as the bomb, responsible government, overpopulation and urbanisation. The children were certainly aware of the seriousness of the latter topics yet those who participated freely seemed to delight in and respond to all of those activities with equal verve. As Jensen discovered (1973) there was no sign of an "intellectual dialect" and the children maintained a fairly uniform level of vocabulary and grammatical structure. They described complex concepts and performed complicated exercises in analysis, synthesis and evaluation in the same tones as they used when speaking to each other about everyday events.

3.3 Patterns of Oral Behaviour

Prior to the commencement of the programme the children were asked the following question :
If I could choose I would always answer questions by:

- writing down ☐
- speaking into a tape recorder ☐
- telling a friend ☐
- telling the teacher ☐
- drawing and writing instructions ☐
- drawing and explaining ☐

Forty-six per cent of the children in group A adhered to their original choice. Forty per cent who did not, resorted to writing and 8% to tape recording when they had intended to do otherwise. Figure 16 below summarises their choice:

Stated Preferences		Actual Mode of Expression	Mode of Major Expression
Writing	25%	96%	71%
Taping	33%	88%	29%
Telling a friend	17%	-	-
Telling the teacher	17%	-	-
Drawing and writing	8%	71%	-
Drawing and explaining	33%	88%	-

Figure 16 : Stated, Actual and Major modes of expression in Group A.

The children obviously enjoyed the variety of means of expression afforded them, for 50% wrote, taped, drew and wrote or explained whilst 38% tried three of these modes. It was obvious that they were unused to such a variety of choice for most of the questions asked concerned what they were permitted to do and how it should be done despite constant reassurance that any means of expression was acceptable.

Children in both groups A and B stated preference for oral means of expression three times as often as for writing and drawing yet, when it came to the actual product in each programme, many resorted to writing, presumably as this was the form to which they were most accustomed. Several children enjoyed drawing and then labelling or explaining their drawings on tape. This, for many, was a novel mode of expression and seemed to lead to exceptionally clear, logical and detailed descriptions which proceeded step by step and were only concluded when all had been said.

For example, Session V: Tree Felling (on tape):

> I would cut the branches into little pieces and let them drop. Then pick them all up and then start cutting the stem at the thick part right down the middle till you reach the bottom and then start cutting it in divisions off and eventually you'd get a whole mound of wood and you can just pick it up with a pick up truck.

After careful attention to the tape recordings of the programmes, it was possible to group the children in Group A according to their predominant oral behaviour patterns. These the writer has chosen to designate as,

The Verbose Innovators
The Responders
The Quiet Recorders
The Non-Communicants
The Non-Participants[1]

The qualities displayed will now be described.

The Verbose Innovators taped and talked at length. They were sociable and needed to have their opinions heard and valued. They were sometimes loud and dominant yet prepared to listen to others' ideas. They had exciting, imaginative and innovative ideas to express. They spoke fluently in long complex sentences and used standard pronunciation and correct grammar.

The Responders spoke only when spoken to, did not use the tape recorder with ease yet were productive in other areas.

The Quiet Recorders seemed reticent to express themselves often in public but would convey their thoughts, as if in secret, to the

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1) Children unwilling to participate in any aspects of the programme.

tape recorder. The *non-communicants* often failed to respond even when spoken to, did not ever volunteer information and seldom spoke to the other children. The *non-participants* seldom wrote, drew, recorded or spoke and produced little if anything at all. They appeared quite happy to while away the time in idleness and returned each week to do so.

The following profiles of each group will provide more detailed information :

Name	General Comments	Reads with Expression, Attention to Punctuation & Meaning	Teacher's Estimation of Oral Ability	Often asks questions in class	Speaks freely, fluently and with ease to class & teacher	Speaks often to teacher and class
Roy	An expressive, fluent and imaginative speaker. The most restless, active, verbal child in the group, also the most productive	Yes	Excellent. Yet described as noisy and spasmodically disruptive.	Yes	Yes	Yes
Don	Tends to dominate in discussion. Occasional use of slang	No	Disruptive and noisy. Above average - has good vocabulary and enjoys speaking in front of the class	No	Yes	Yes
James	Eager, excitable and expressive	No	Very good. Busy	Yes	Yes	Yes
Louis	Fluent expression of mature ideas	Yes	On a completely adult level with the additional joy of a bubbling sense of humour	Yes	Yes	Yes

Figure 17 : The Verbose Innovators

Name	General Comments	Reads with Expression, Attention to Punctuation & Meaning	Teacher's Estimation of Oral Ability	Often asks questions in class	Speaks freely, fluently and with ease to class & teacher	Speaks often to teacher and class
Paul	Often disruptive. Tends to speak in disjointed phrases. Grammatical errors occur.	No	Restrained.	No	Yes	No
Anne	States that she only talks a lot at home.	Yes	Average.	Questions instructions not heard.	Yes	Yes
Arthur	Extremely reticent.	No	Doesn't volunteer information	No	Yes	No
Charles	Never volunteers information. Speaks quickly & fluently when questioned.	Yes	Does not communicate freely and easily. Difficult to draw out.	No	No	No
Francis	Noisy on arrival & in corridors, otherwise quiet.	Yes	Hesitant in front of the class. Merely answers yes or no. Doesn't volunteer information.	No	No	No
Alison	Sedate & quiet. Fluent speech & mature ideas when spoken to.	Yes	Good with precise pronunciation. Sometimes a tendency to gabble if hurried.	No	Yes	Yes

Figure 18 : The Responders

Name	General Comments	Reads with Expression, Attention to Punctuation & Meaning	Teacher's Estimation of Oral Ability	Often asks questions in class	Speaks freely, fluently and with ease to class & teacher	Speaks often to teacher and class
Steven	Possesses advanced vocabulary eloquently expressed. Would only tape what he'd written down.	Yes	Very good. Expresses himself fluently and with ease.	No	Yes	Yes
Rose	Tied to the written word. Would read this onto tape.	No	Excellent	No	Yes	Yes
Nicholas	Would only record what previously written.	Yes	Has good communication with the teacher - not as good with peers. Speech always technically correct.	Yes Especially the consequences.	Yes	Yes
Sean	Quiet yet responsive and liked to tape.	No	Good	Yes	Yes	Yes
Lloyd	Quiet. Responded well & liked to tape.	No	Good when feels like joining in - at times says things for effect	No	Yes	Yes
Chris	Meticulous perfectionist. Never spoke or taped until sure of facts.	Yes	He has a wide range of facts which he enjoys talking about. Speaks jerkily.	No	Yes	Yes
Dale	An extremely imaginative child - expresses these ideas fluently on tape.	Yes	Fair - can hold an intelligent conversation. Reluctant to converse with peers.	No	No	No

Figure 19 : The Quiet Recorders

Name	General Comments	Reads with Expression, Attention to Punctuation & Meaning	Teacher's Estimation of Oral Ability	Often asks questions in class	Speaks freely, fluently and with ease to class & teacher	Speaks often to teacher and class
Edward	Spoke very occasionally when spoken to.	No	Seldom seen communicating with others. Quiet but fluent.	No	No	No
Rosemary	Whispered if spoken to.	No	She is able to communicate adequately but does bot often take opportunities to communicate orally in class.	No	No	No
Johnathan	Inaudible, spoke only to gain attention.	No	Good.	No	Yes	Yes
Albert	Spoke freely and well occasionally if motivated. Otherwise inaudible.	No	Good	No	Yes	No
Patrick	Disjointed phrases interspersed with sentences. Inaudible.	No	Immature expression often making babyish sounds and gestures.	No	Yes	Yes
Owen	Inaudible. Would communicate only with encouragement	Yes	He speaks well & is able to make himself understood.	No	Yes	Yes
Frank	Gives up easily. Incorrect usage.	No	Vociferous, argumentative.	No	Yes	Yes

Figure 20 : The Non-Communicants and Non-Participants

Some of the conclusions that may be reached from the above data are as follows :
The majority of the children failed to communicate orally as freely and as expressively as one might wish or expect from children of apparently high intellectual potential. In almost all cases - except that of the non-participants - the children appeared to follow similar patterns of oral behaviour in class and during the special programme. This may have been due, in some cases, to personality traits such as extreme shyness or reticence, yet the children made it abundantly clear throughout the programme that they were unused to a wide variety of modes of expression. They tended to resort to the written word and to rely on it as a basis for tape recordings or oral expression. The writer sees a need for encouragement in the classroom for children of high potential to be more adventurous and expressive, for they often failed to express the depth of insight and thought of which they were capable.

It would seem from the teachers' responses to questionnaires1) that the children also often failed to ask questions regarding either content or methodology. Many of them have thus become passive learners. As such they have little opportunity to share their ideas (and often wide background and general language knowledge) with the rest of their class. It was clear that some children (Chris for example) had become so tied to facts and to perfection that they avoided spontaneous speech for fear of stumblings and errors.

The children's ineptitude was clearly revealed in the inability of nearly half (46%) to read with feeling i.e. with expressive attention to meaning as revealed in punctuation, tone and dialogue. All read with technical excellence as far as word recognition was concerned but many could go no further and rendered passages in a dull, stumbling monotone. It was no surprise then that 25% of Group A read so infrequently as to be classifiable as 'non-readers'2).

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1) See case study, p. 131 for an example of this questionnaire.

2) Used in this study to signify 'children who *do not read*' rather than cannot read.

Clearly those children in the non-communicant and non-participant groups require specialised individual attention. The former may need special therapy to aid them in communicating ideas and feelings if they are to contribute to society and fulfil their true potential. Edward was, in fact, so disturbed and so cut off from his peers and even his parents that he had often threatened suicide. The non-participants obviously warrant special consideration. All of them stated that they had enjoyed the programme either 'very much' or 'fairly well' yet they produced very little. One might be tempted to attribute this to general apathy as Johnathan, Albert and Patrick were said to be unenthusiastic about school whilst Frank was 'reservedly' so. The writer would like to propose that certain more basic linguistic deficiencies such as those detailed below may have contributed to their apparent lack of motivation.

Four of the non-participants spoke inaudibly and appeared to lack confidence when speaking. Some of the others were unable to construct full, grammatically correct sentences. It was interesting to compare their I.Q. scores with their results on the Human Sciences Research Council English Higher Achievement Test (See figure 21, p. 130).

It would appear that such children would benefit greatly from short periods of intensive individualised instruction
weakness, namely, spelling, usage and grammatical structure. They have the intelligence to grasp concepts quickly and improved verbal efficiency would no doubt benefit their school performance as none are, at present, said by their teachers to be achieving at their peak. Short periods of instruction with the aid of a tape recorder could aid their oral efficiency and audibility. Such short periods of individualised instruction could be carried out by specialist teachers who are trained and able to fulfil this task. Lest it should be thought unnecessary to provide specialised attention for such children the writer includes more detailed information on Patrick, including a psychologist's report.

Name	N.S.A.G.T. Administer during Programme			N.S.A.G.T. School			N.S.A.I.S.			H.S.R.C. Achievement Test					Comments
	V.	N.V.	T	V.	N.V.	T	V.	N.V.	T	Voc.	Us.	Comp.	Spell	T	
Johnathan	105 ←	119	112	117 ←	132	126	131 →	126	132	93	78	82	85	88	More than a 10 point advantage in favour of non-verbal abilities in both group tests. Usage score lower than the others.
Albert	120 →	115	118	126 →	120	129	133 →	127	133	99	(64)	84	88	88	Significantly poorer performance on the Usage Test.
Patrick	108 ←	126	117	not available			113 ←	148	131	78	(63)	76	㊱	62	Noticeable stress on non-verbal ability. Significantly lower Usage and very poor spelling.
Owen	114 →	105	110	113 ←	115	115	125 ←	150	140	91	㉜	79	75	72	Very large stress on the non-verbal ability on the N.S.A.I.S. Very poor Usage.
Frank	123 ←	132	129	114 ←	145	129	137 →	135	140	(68)	㊹	(66)	㉞	(56)	Stress on non-verbal ability in both the Group Tests. Very poor scores in Usage, Spelling and overall achievement.

Figure 21 : A Comparison of the Non-Participants I.Q. Scores with their Scores on the H.S.R.C. English Higher Achievement Test.

3.4 Case Study : Patrick

I.Q.

N.S.A.G.T.			N.S.A.I.S.		
V.	N.V.	T.	V.	N.V.	T.
108	126	117	113	148	131

H.S.R.C. English Higher Achievement Test

Vocabulary	Usage	Comprehension	Spelling	Total
78	63	76	36	62

Attended 14 sessions   Age 8.4

General Profile

Patrick displays several indications of a negative self-concept and states bluntly that he does not like his teacher and his siblings and that they feel the same way about him. He has few friends. His main interest at school is art. He enjoys cubs and his favourite hobby is 'electric'. He says he thinks rather slowly, likes to make models, does not like writing and reads 'nothing'. Yet he says the teacher expects too little of him.

Patrick's Teacher's Response to the Questionnaire

1. What is your opinion of the child's general intellectual ability?
   Average. Mother believes him to be very bright. I have noticed only some isolated moments of creativity.

2. What is your opinion of the child's linguistic ability in :
   Writing : *Patrick lacks motivation. He very seldom produces much. Does not put ideas on paper with ease.*

Reading : *Fair. Patrick's reading age is below his chronological age.*

Oral Communication : *Satisfactory. Immature expression, often making babyish sounds and gestures.*

3. How would you rate the child's performance in comparison to the other children in class?

   Generally : *He copes well with the standard of work, but only works when he wants to. Mediocre.*

   In the language skills : *Average. Is he under-achieving?*

4. Is the child performing at his/her peak in your opinion? *No. I feel he is under-achieving.*

5. How does the child behave in class? *Very difficult to settle down to his work. Erratic, can take confident part in group discussions/activities.*

6. Please indicate evidence of the following tendencies with a tick.

   independent ✓
   sociable
   reliable
   polite
   noisy
   conscientious
   restrained
   disruptive

   bored ?
   quarrelsome Can be.
   absorbed
   troublesome
   fidgety ✓
   a dreamer ✓
   an untidy worker ✓
   calm

7. Compared to the rest of the class, the child works

   quickly ☐
   slowly ☑
   at an average pace ☐

8. Does the child ask many questions? *Not really.*

   Of what type? *Often geared to making things (his father helps him a lot).*

9. How do you deal with the questions asked? *Answer truthfully. Try to encourage his ideas, hoping for some positive motivation.*

10. Is the child enthusiastic about his/her
general schoolwork? *No*
language activities? *No*

11. Would you say that the child has developed sound study habits? *No*
Please supply details: *Lacks motivation, concentration. Is not constant.*

12. Has the child many ☐ few ☐ some ☑
friends in the peer group?

13. Does the child show any signs of emotional problems? If so, please give details. *Emotionally immature. Once he refuses to do something it is difficult to show him he needs to do it. Stubborn and impertinent at times.*

14. Do you have regular/any contact with the child's parents? *Parents attended evening set aside at beginning of year. Have not had contact since other than one or two incidental meetings.*

15. What educational level would you expect this child to reach in adulthood? *Standard 10, hopefully.*

16. Does the child show any signs of leadership qualities? Please give details. *Patrick could organise a group (if he so feels/wishes) but his peers object to being overtly domineered.*

17. Would you say his/her powers of concentration are

good ☐
average ☑ *to poor depending on the child.*
poor ☐

Language Ability

Writing

1. Does the child enjoy writing? *No*

2. Does he/she write at length? *No*

3. Does the child ever show you work written at home? *No*

4. What is your estimation of the child's written work as concerns :
    Grammatical correctness? *Basically correct.*
    Punctuation? *Satisfactory*
    Level of vocabulary? *Good*
    Complexity of sentence structure? *Simple sentence structure*
    Originality? *Shows spurts, not very often however.*
    Fluency? *Satisfactory*
    Evidence of logical thinking? *Average*

5. Please describe some of the stimuli you have devised to encourage writing. *Recorded extracts. Films. Extracts from books (e.g. Witch's Egg). Poetry. Let's imagine. Write from experience.*

6. To whom is class writing directed? *To the class. Good stories read out - build self-image.*

7. Have you taught the children to take notes? *I feel J.P. level is a bit young.*

8. Have you taught the children any research skills in order to aid them in project work? *Yes.* If you have, please give details: *Theme work, workcards based on books from library. Page of answers supplied in most questions.*

9. Have you devised any special activities for this child which the other children are not required to do at all? *No.* If so, please give details. *Patrick does not finish his work, has no time for extending activities. (Has made a model of a cave at home).*

10. Do you exempt this child from some activities related to sections of the syllabus in which he/she is already proficient? *No.* Please supply comment: *He does not appear proficient in any sections of the syllabus.*

11. Do you teach such areas as time sequence, word order, the format of dialogue, direct and indirect speech, paragraph construction, etc. in a formal manner?

Yes ☐
No ☑

Please supply details in either case: *Language at J.P. level is incidental.*

12. Do you think that the linguistic register that you usually employ in the classroom is:

Completely understood by the child ☑
Too difficult for this child ☐
Below the child's own language register ☐

Reading *(3 mths. behind C.A.)*

1. What is the child's

reading age? *8 yrs. 7 mths.* Test: *D & D No. 1* Date: *11.06.80*
spelling age? *7 yrs. 8 mths.* Test: *Burt* Date: *13.11.79*
silent reading ability? *7 yrs. 8 mths.* Test *D & D* Date: *5.05.80*

2. Describe the child's choice of reading matter: *Does not take a library book out each week as do peer group.*

3. How many books per week does he/she read? *1 (100 pages) or 3 (30 pages).*

4. Do you recommend titles for this child? *Have tried.* If you do, please give examples.

5. Do you request him/her to do set reading or do you allow a free choice of titles? *There is a selection of reading books of their reading age. They select an appropriate book.*

6. Does the child read fluently?

Yes ☑
No ☐

7. Is he/she often asked to read aloud in class?

Yes ☑
No ☐

Belongs to local Library, but "I haven't taken any books out for a long time".

8. Do you ask this child to help others with other English work?

Yes ☐
No ☑

9. Does the child choose to read if he finishes work early? *Never finishes early.*
Do you allow the child to do so? *N/A*

10. What method/s do you use to teach comprehension? *Reading laboratory story cards (pictures). Story cards (writing).*

11. What type of comprehension questions do you prefer? *Finding out, use your imagination, follow instructions, how do you feel about?*

12. Do you read to the children

often ☑
seldom ☐
occasionally ☐

Please give details of the titles: *The Witch's Egg, This is Ridiculous, The Castle of Adventure.*

13. Do you use passages of prose or extracts of poetry as stimuli to written work?

Yes ☑
No ☐

Please supply examples: *Twigwidge, Witch's Egg, I'm Hiding, The Tortoise, Weather.*

Oral Communication

1. Does the child speak freely, fluently and with ease:

    before the class ☑

    to you ☑

    before a larger audience ☑ *(Inclined to put his*

    before those in authority ☑ *head down)*

2. Does the child speak often in class:

    to you ☑ *But insists on babyish tone of voice and mannerisms.*

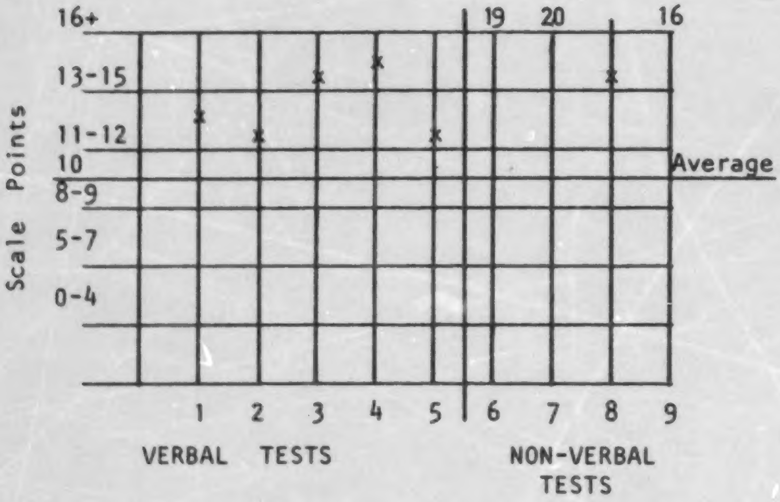
    to the other children ☑

Psychologist's Report on Patrick

Graphic Representation of I.Q. Test Results:-

Verbal I.Q.: *113* Nonverbal I.Q.: *148* Total I.Q.: *131*

(Key: 1-Vocabulary; 2-Comprehension; 3-Reasoning; 4-Arithmetic; 5-Memory; 6-Pattern Completion; 7-Blocks; 8-Absurdities; 9-Form Board).



New South African Individual Scale (NSAIS)

According to the NSAIS intelligence test, the extremely large discrepancy between and non-verbal I.Q. scores reflects a specific learning disability which is manifest in a concentration problem.

The verbal tests are vulnerable to this as the cues require auditory attention, whereas the non-verbal cues are still visible when concentration is resumed.

His verbal I.Q. score is above average, and his non-verbal, logical, abstract reasoning ability is well within the gifted range. Since our school system is language orientated, his ability would not show in the classroom and he would underachieve in terms of his potential.

Hand-eye co-ordination, measured by the Bender Gestalt Test, is normal for age.

Background History

An emergency caesarian section was performed due to foetal distress and the baby did not cry immediately. He was allergic to milk and is prone to allergies.

He doesn't follow instructions and doesn't listen, probably due to his concentration problem. He is only just coping in school.

Conclusions

His para-natal history may account for his present learning disability and concentration problem. Also, many children with allergies have learning disabilities.

He has apparently benefited from the medication and should now begin to achieve better results.

Patrick's serious problems in the language-based areas were reflected in both the quality and quantity of the written and oral output over the fourteen sessions attended. He said that he would prefer to draw and then explain, yet despite some obviously interesting and creative ideas was reluctant to do either. His only tape recording required considerable gentle coaxing by the researcher in order to elicit a broken yet still comprehensible narrative.

In all, he wrote a mere 36 words, and executed six drawings - one of them a cartoon character drawn during a discussion session in which he did not participate. In fact, he never joined in discussion at all. His drawings were more adept than his writings and afforded considerably greater attention to detail and depth. Torrance (in the foreword of Gowan and Demos 1964) comments on the complexity of the functioning of the human mind and personality with reference to creative giftedness and notes that "some children are exceptionally fluent in the producttion of ideas expressed in words but are unable to express ideas in visual or auditory symbols: others may be tremendously fluent in expressing ideas in visual symbols but appear paralysed mentally when asked to express ideas in words or sounds" (p. ix). Patrick clearly fell within the latter category. Yet, despite the difficulty he found expressing himself he admitted to having enjoyed the sessions fairly well - especially the drawing of the bridge.

He did not like having to describe his picture (in the tape recorded interview). His parents considered that he had enjoyed the programme very much and that he was always interested except during the last few discussion sessions. They said that he didn't like to "write on Saturdays" yet that since attending the programme, he had begun to read more and that his concentration was 'much better'.

3.5 General Talk

Bridges' assertion (1969, p. 143) that children of high ability enjoy talking is certainly borne out by the level of noise on the general recordings made by the researcher. Not only did the children in Groups A and B talk a great deal, they also accompanied their pursuits with an almost endless variety of whistles, grunts, snatches of song, hisses, mumbles and engine imitations. Yet these bursts of cacophany were interspersed with spontaneous periods of silence during which they were all busily occupied. Most of the children appeared to have singular powers of concentration no matter how loud the talk or how restless the movements of the others. They settled down to their tasks and ensured that they completed them. The non-participants were, of course, the exception, they commenced little, produced less and yet were only occasionally disruptive.

Most children chatted informally to one another while they worked with the notable exception of Charles, Anne, Arthur, Rosemary, Edward and Patrick. In fact Rosemary could only have spoken ten words or so during the fifteen weeks but would respond warmly to displays of physical affection from the writer.

The general level of noise would generally be considered unacceptable in the ordinary classroom - it would certainly disturb others and could probably not be borne by a teacher for the entire school day. It could perhaps not even be sustained by the children for more than a two hour period! Yet it seemed to be an essential part of the initial stimulus required to produce anything unusual or imaginative. There was always silence as the researcher introduced a session followed by hoots of excitement, hilarity, expressions of wonder, disbelief and exclamation. All speech was spontaneous and simple. There were no signs of a conscious attempt to raise the level of vocabulary or to increase the structural complexity. Usage was generally standard i.e. grammatically correct and couched in acceptable pronunciation. There was no need for the researcher to repeat complicated instructions or to explain technical terms. Indeed, the children took delight in spontaneously providing their own definitions. The technique employed was often one of definition by contrast, thus for example,a framework was likened to a skeleton whilst a shell was termed an 'outside covering'.

The discussion of lexical terms was thus seldom necessary or a matter of conscious debate. An exception can be found in Session XII in which they took delight in manufacturing words and rhymes to describe a new planet. Some were long yet logical for example , PRONOMONOSONOLONOBONO (Sean) in which each syllable represented the name of an object i.e. mono was the animal, prono the plant, and so on. Some were weird and exotic: 'Eirpion', 'Inframode', (Alison); some funny: 'Ponque' (Francis) and 'Zonk' (Edward) and some simply unpronounceable.

In general language was seen *primarily as a vehicle for expressing concepts, thoughts, ideas and imaginings; for clarifying and conveying processes of analysis and synthesis, rather than as being of special interest in itself.* It was seen as a *tool* to express new ideas in great variety and profusion, to illustrate points with personal anecdotes and to display considerable general knowledge and knowledge of world affairs. As Jensen (1973) noted the conditional 'if' occurred often with reference to possible consequences and outcomes - especially as regards moral issues and the present state of world affairs.

A failure to reflect the speed, efficiency, depth, sophistication and degree of abstraction of the original thought in the written word often noted in the previous chapter unfortunately characterised some of the *more informal talk* during the sessions - the playlets and the tape recordings. The discussions and informal chatter provided clearer insights into the depth and breadth of thought of which the children were capable. The tendency to utter the mundane, obvious and conservative may reflect the notable absence of originality both in stimulus and product in the classroom where often no special1) effort has been made to evoke it.

Even more disturbing was a tendency to reproduce what had previously been read or heard or to attempt to rely on memory and to 'give up', rather than hazard novel and original ideas when memory failed. Some

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1) See comments on the teachers failure to provide special facilities, (see Section Eight, p. 174).

children recognised the phrases in Session IV as proverbs and hastily attempted a mental review of those previously learnt thus mismatching them with the new ones. They had to be constantly reassured of the value of their interpretations as opposed to 'the correct answer' probably a symptom of the convergent nature of the work to which they are most commonly exposed in the classroom.

The only consciously 'prepared oral' work in the programme - the playlets in Session XIII - similarly displayed inattention to adequate preparation of content, speech, style or final effect. The efforts were generally short, common expressions of juvenile wit and slapstick humour, which could not be sustained for longer than a few minutes. The only polished performance came from Keith and Amanda who were able to 'perform' their Eisteddfod pieces, being in the same class at school. These findings substantiate Gowan and Demos' proposition (1964, p. 147) that "some gifted children do poorly in oral work that requires preparation".

An overall impression of disorder and chaos may have been given in the above account of the children's talk. In fact, despite the level of noise and constant activity, the writer had very little occasion to reprimand the children. 'Pranks' were usually related to the programme content or to some explicable (if unusual) 'experiment'.

3.6 Session XIII - The Playlets

An Exercise in Evaluation

Groups A, B and C

The children were asked to perform solos or to work in groups in order to entertain the rest. They were allowed a little time to prepare. Each act was then both marked and assessed by the 'audience' whilst the researcher indicated the variety and range of marks on the blackboard. It was hoped that the children - besides the enjoyment of both performing and watching - would arrive at some understanding of the subjectivity of assessment and of the wide variety of differing views expressed about the performances. In order to arrive at this understanding, some set standards for judging work had to be developed and then applied.

All the children enacted their performances with childlike enthusiasm and little style, in the manner described earlier. Six children in group A arrived at some understanding of the subjective nature of assessment, whilst eight in group B did so (half the children). None of those in group C were able to accomplish this task. In the latter group there was a considerable degree of open vindictiveness during the allocation of marks whilst the children in both high I.Q. groups seemed to accept contrary points of view and opinions with greater sincerity and honesty.

3.7 The Tape Recordings

The taped answers in most cases represented unprepared pieces spontaneously recorded. Steven, Rose and Chris were interesting exceptions and reflected an uneasiness with the freer, spontaneous characteristics of the spoken word. The first two, a brother and sister, who both taught themselves to read at the age of two years, would only *read* onto tape what they had previously prepared in painstakingly neat written form. Chris was likewise so attached to precision, perfection, and 'correct' facts that he would only record after careful written preparation. For example, in response to the translation of textures into words during Session II he wrote

> "The wood is rough and coarse and has splinters. The satin is soft and slippery and smooth. The cardboard is rough and has corregations. The soap water is very soapy and slippery. The skin of an orange is damp, slippery and rough. The glass is smooth and slippery" -

simple and compound sentences executed with assured fluency.

In general though, the recordings display an abundance of hesitations, pauses, rewordings and stumblings[1] executed in a monotonous tone with little attempt to convey expression, respect punctuation or elevate vocabulary. The children were concerned that *what* they said should be a logical reflection of their thoughts and not a polished verbal performance yet there was evidence of a conscious effort to sort out and rearrange events for the benefit of the listener.

Roy, in the second session, displayed considerable attention to correctness of detail and to technical data but executed his description in longer, complex, more adventurous and descriptive tones with eyes screwed tightly closed so as better to translate the *FEEL* and not the 'look' as directed by the researcher.

> "The skin of an orange is ... um ... bumpy. It has got a very characteristic place where the orange has got a big ... um ... rough lump. The or ... the orange isn't, isn't exactly round but is more or less. Um ... . It has got three cracks in it, as far as I can feel ...(pause) ... and is about as big as my hand".

> "The bubbles on top of the water feel like snow, soft snow. The water is very cold and sort of like, on the bottom of the bowl, is slimy ... pause ... When you splash the water, is - gives a sort of like ... um ... mushy sound.

Besides the obvious use of the pause exampled above i.e. to aid the choice of individual, suitable words, the researcher noted a tendency for the children to pause in order to ensure correct and logical expression of a sequence of events, ("First you put the body ... (pause)... body and ...(pause)... and second you put the chassis" - Owen, Session VII) and in order to clarify or render a previous statement more specific (" ... the buildings surrounding it prop the tree up and then chop ...(pause)... then, gradually chop it down").

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[1] As would probably be the case with most adults.

Those children who used the tape recorder regularly operated it with efficient ease and came to see it both as an audience in itself (to which one explained difficult concepts carefully, often accompanied by elaborate gestures!) and as a means of gaining the researcher's undivided attention. Thus the recordings were punctuated with little personal messages such as "bye for now", "see you later" and "that's all for now".

3.8 The Discussions Sessions XIV and XV

The discussion sessions were the last two items on the programme and were intended as exercises in evaluation, requiring both an understanding and acceptance of others' points of view and a personal stand based on certain relevant criteria. The topics used as a basis for discussion included the global effect of the explosion of the first bomb, increasing urbanisation, population control, franchise rights and the present education system in Natal. These were beyond the range of topics usually encountered at primary school level. Martinson (1968) proposes the early exposure of bright children to such topics; "It is sounder educationally to use subjects of concern to the children than to postpone them until the children are old enough. Learning on these and other similarly abstract topics, such as voting rights and responsibilities or the meaning of free enterprise is a cumulative process" (p. 25). That children of high ability enjoy (especially as an alternative to writing, tape recording or drawing) discussion was clearly demonstrated on the tapes. That it suited the older children more than the eight and nine year olds was also clear. Gowan and Demos' (1964) suggestion that children of high ability are not so successful in "the give and take of conversation or discussion" (p. 147) was largely substantiated except during the discussion on education in which everyone participated with great verve. During the other discussions on moral issues and world affairs the verbose innovators were dominant. They needed to be heard, to share their ideas and to have them recognised as valid and valuable.

The children would often offer their ideas all at once until the loudest became dominant. The discussion was often between two or three children who made no attempt to draw out the quieter ones or to ask another's opinion. They were quite prepared to listen to what the others had to say but did so in order to redefine and continue the topic on their own terms. In spite of this rather roughshod attitude to discussion, they were well aware of differing possibilities and were well able to sustain a topic for an hour or more maintaining at least *some* impression that it was real conversation and to *some* extent collectively determined (Martin 1976, p. 15).

They displayed an exceptionally mature awareness of the complexity of moral issues and were not afraid to state controversial views. They made mention of corrupt government, the difficulty of implementing global policies and of fine and delicate issues such as the point at which control and freedom meet and the difficulties of implementing policy which affects personal issues such as birth control. All these issues were discussed in the same tone and the same terms as were used in general informal chatter to each other.

3.9 Overview

As was noted in connection with written expression in the previous chapter, the children's oral output was characterised by a great variation in terms of degree of voluntary participation, length, depth, fluency, originality and correctness of utterance.

Informal talk was much in evidence as was the loud and immediate reaction to most of the topics introduced by the researcher. Although a general level of everyday language was maintained throughout the programme, a tendency to consider the choice of lexical items, to clarify previous statements and purposefully to sequence events was noticeable during the tape recordings.

Although the children initially stated a preference for oral taped expression they finally often resorted to the more familiar modes of writing or drawing. However, the researcher was able to define certain patterns of oral behaviour and was thus able loosely to group children under headings such as: the verbose innovators, the responders, the quiet recorders, the non-participants and the non-communicants. These terms largely coincide with their patterns of oral behaviour in the classroom. Sadly an overall consideration of these patterns marks most of the children as passive learners and some as in need of specialist attention if they are to participate fully in the scholastic world and beyond.

The children clearly had no difficulty in following complicated instructions or technical terms, or in understanding discussions on complex, abstract issues. However, their willingness to participate in discussions and to use oral expression as an effective tool for the manipulation of the higher cognitive processes varied considerably from child to child.

It has become clear that such children need to participate in the discussion of advanced and abstract topics not merely because they *CAN* do so, or because they may have valuable ideas to contribute but especially because they need practice in order to cumulatively develop a balanced personal stand through experience in hearing and understanding other divergent views. It is equally clear that all the children from the most dominant and verbose to the most reticent need to learn the skills which will lead them to this end - some must learn really to *listen* rather than dominate whilst others must learn to begin to *participate*.

4. READING

Fliegler (1961) comments that only in rare cases are 'gifted students' "able to satisfy their great desire for knowledge by some means other than reading" (p. 214). He goes so far as to nominate good reading ability as a characteristic of superior ability. "Just as vocabulary has been identified as the best single indicator of intelligence, good reading ability and a wide variety of reading interests have become characteristics of those school children identified as gifted. There are many exceptions to this generalization, but most gifted students are avid readers of a wide variety of materials" (p. 214 and 215). This opinion is substantiated by Terman's work (cited in Laycock 1979, p. 43), by Gallagher (1975, p. 5) and by Dunn (1973, p. 210).

The children in study groups A and B had indeed an average of two years nine months advantage of Reading Age *above* chronological age[1] and an average of two years advantage of spelling age over chronological age. Their teachers were impressed with their reading skills (even of those in the 'non-reader' and predominantly 'non-verbal' group) but were divided as to the exact meaning of 'reading'. Some merely stated 'good' or 'very good', others referred to fluency or expression, understanding of meaning and vocabulary or the amount and level of reading material. Yet nearly a third (29%) of these teachers could not comment on the child's choice of reading matter and 32% did not know how many books the child read per week. Thirty-nine per cent failed to recommend titles to the children. This is surprising in the light of the emphasis placed on reading in the primary school and in the light of the fact that reading was encouraged after the completion of work by 97% of the teachers whilst 84% of the latter read to the children often and the other 16% did so occasionally.

The key to the above contradictions may lie in the stress placed on *technical reading ability* i.e. the ability to recognise words and pronounce them accurately. Ninety-seven per cent of the children

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1) Sixty-eight per cent of scores were available on the Burt or one of the Schonell tests.

were regarded as skilled by their teachers in this area. Teachers were less concerned with *what* and *how much* was read. In fact they estimated that the children read an average of 2,6 books per week (the most was six) whilst the children actually read nearly double - an average of 4,2 per week (the most being more than ten). More significant though (*and also more distressing*) is the fact that only 28% of the children were reading more than children's literature of the level of Nancy Drew, the Hardy Boys or Enid Blyton. The non-readers (Arthur, Johnathan, Patrick, Don, Frank and Jill) read an average of only one book per week (usually the school set book) whilst Patrick, Arthur and Johnathan never read for pleasure. The children with noticeably higher non-verbal abilities in the I.Q. tests (Paul, Patrick, Lloyd, Owen, Frank, Rosemary, Malcolm and Hugh) fared better - reading an average of two books a week - yet their reading age was on average only one year seven months above chronological age - certainly well below their mental age (average N.S.A.G.T. Total 131). None of the children designated as 'non-readers' or predominantly 'non-verbal' were said by their teachers to be achieving at their peak in school.

Gowan (as cited in Gowan and Demos 1964,, p. 220) concluded "that reading ability, even apart from its intelligence component, occupies a central position in the determination of achievement". The advantages said by Criscuolo (1963) to be possessed by superior readers are many and may explain why children who have I.Q's above 130 (i.e. superior academic potential) yet are unwilling readers, perform poorly or only at an average level in the classroom. Criscuolo states superior readers as able to "perceive relationships", "deal with abstractions", as "capable of drawing conclusions", as "being "curious, creative and imaginative" and as able to memorize quickly. He thus advocates exemption from "unnecessary routine drills and repetition of materials already known" (p. 163).

The teachers of children who do not possess such advantages (such as those designated 'non-readers' or predominantly 'non-verbal') should perhaps note Sabaroff's advice (1965, p. 394). She warns that even bright children might not have developed the mechanics of word analysis sufficiently. As they dislike drill and may be impatient with details they may in fact begin to dislike reading, pay insufficient attention yet pick up sufficient clues to maintain reasonable progress and even score a little above average on multiple choice type standardised tests. Unless teachers regularly examine the reading aloud of short graded passages, such difficulties may remain unknown. Sabaroff advocates, "dictionary skills, the use of the encyclopedia, and other reference skills, such as outlining and note-taking", as valuable skills for bright children rather than "just going on to the next grade level reader" (p. 398). Indeed 87% of the teachers of study groups A and B often taught such skills in conjunction with the librarian.

Gensley (1975) and Renzulli (1977) go even further. Gensley advocates the following :
"Reading for the gifted should be a process of gathering information, interpreting information, processing information, analysing information, evaluating information, and using information" (p. 21).

Renzulli (1977) advocates that the 'gifted' pursue real problems, "produce rather than ... consume information (p. 32) and thus require some general instruction in "advanced library skill" (p. 59) i.e. "beyond the usual exercises that deal with the Dewey Decimal System and how-to-use-the-card-catalogue" (p. 59). He recommends extensive knowledge of the "existence, nature and function" (p. 59) of reference materials.

5. WRITING

5.1 Supportive Evidence

Burrows (1967) advocates that a gifted child requires protection "from school expectations that he has an obligation always to do better than others" (p. 33). It would seem that children of high academic potential are noted for poor achievement in both the mechanical skills of writing and the quality of the written product. Hollingworth (as cited in Dunn 1973) noted "that children with very high I.Q's often have problems with games and tasks requiring close co-ordination such as writing" (p. 208). Of her famous 'child E' she wrote : "His writing is not equal to his other accomplishments. He is very slow at it and for this reason dictates most of his "homework" to a stenographer" (in Dunn 1973, p. 7).

Bridges notes in both the Millfield and Brentwood experiments, a disinclination to commit thoughts to paper and considerable disinterest in the final product.

Besides the most obvious influence of poor mechanical skills, a publication of the Office of Gifted and Talented in the United States (1979 Fact sheet) warns of children[1] whose "verbal skills lag behind their creative abilities". The above fact sheet thus sounds a warning to teachers.

> Here instruction must maintain a careful balance. While the child needs to develop structure and organization, the teacher must be careful not to discourage or inhibit the child's creativity. Constant reassurance as to the worth of the child's ideas, as well as reinforcement of basic language skills become the primary goals for teachers of gifted children whose abilities are unevenly developed.

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1) The work of such a child, Roger, has been described in some detail in Section Four.

Burrows (1967) too notes an overconcern among highly creative youngsters for "what they write, not with neatness and other externals" (p. 34). The dilemma of minimum standards thus faces the teacher. Burrows suggests 'fair' copies for display whilst other work should be read aloud and then filed away.
Dunn (1973, p. 208) suggests that requirements for precision and neatness may interfere with ideas and that stipulations to produce 'neat work' may result in "impatience and conflict" when mental functioning is rapid and at an advanced level.

Many authors have advocated a language programme which includes many different kinds of writing programmes for children with superior intellectual potential. The United States Office of Education Fact Sheet (1979) emphasizes for example that not all gifted children should necessarily be developing "creative writing techniques" but might find greater need to develop their ability in "expository writing and research skills" especially as much emphasis is often placed on independent study for children of superior intellectual potential. Individual interests, journalism and advertising can be used to integrate all the language arts with critical reading "yet still provide ample opportunity for creative expression". In general then, "an integrated language arts program that stresses the application of many writing skills to numerous content areas" is recommended.

Martinson (1968) warns against the compulsory writing of 'book reports' for the gifted primary school child whose "writing is far more laborious than his thoughts" (p. 80) and advocates that "oral communication about especially liked books and poems should take precedence over written reports" (p. 81) lest he should "avoid the pleasures of reading extensively in order to avoid also the pain of having to write reports" on what is read (p. 80).

5.2 The Children's Attitude to Writing

All children in the writer's Study Groups A, B and C were asked to indicate their preferences as follows :

I enjoy writing ☐

I like to write

stories ☐

letters ☐

poems ☐

other (specify) ☐

I do not like writing at all because ....

....

Twenty per cent of Groups A and B completed the last alternative, 'I do not like writing at all because ....[1]
as follows :

'I cannot write neatly' (Arthur).
'It hurts my hand after a while' (Johnathan).
'I am untidy' (Sean).
'I have untidy writing' (Lloyd).
'It is boring' (Chris).
'I can't think of anything' (Graham).
'I don't like composition at school' (Hugh).
'My arm gets tired' (Laura).

Only one child in group C completed the sentence, and then as follows :

'It board me a little' (sic) (Margaret).

As indicated in the literature reviewed, some children with superior intellectual ability are discouraged by the laborious, mechanical process of writing and the physical discomfort it may cause. They reflect an impatience with the usual demands for neatly presented work.

5.3 Teachers' Assessments of the Children's Writing

The teachers of children in Groups A and B were asked to state their opinion[1] of linguistic ability as seen in written work. They were also asked whether the child enjoyed writing, wrote at length or ever showed them pieces written at home. Teachers were also asked to estimate the child's proficiency in terms of punctuation, level of vocabulary, complexity of sentence structure, originality, fluency and evidence of logical thought.

Many teachers responded to several of the questions with a general 'good' or 'above average' comment. Others were only concerned with neatness and some were clearly confused, for example, Jean's writing was described as 'fairly fluent. She does not use much vocabulary although she knows the meanings of words'!!

Other teachers were clearly more acquainted with the real value of the children's work and offered such comments as the following :

(Arthur) "He enjoys extra stimulation but not ordinary work".

(Roy) "Very good indeed. His work is full of action and humour".

(Lloyd) "A thorough command of the English language used effectively and imaginatively".

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[1] See example of the teacher's questionnaire in this section

(Dale) "Good when sufficiently motivated".

(Frank) "Good but tends to be lazy and tries to get away with the bare minimum".

(Keith) "Has a good command of language but doesn't enjoy putting thoughts to paper - comprehension is always answered concisely".

(Angela) "Could be excellent - inclined to write as little as possible and use a limited vocabulary".

One wonders if Arthur's and Dale's teachers felt some degree of conscience at their admitted inability to 'motivate' and 'stimulate'. Teachers were also at variance as to the meaning of the term 'linguistic proficiency', taking it to mean either mechanical skill, ability to sustain a piece of writing, grammatical correctness, level of vocabulary or quality of the ideas expressed.

When asked their opinion of specific areas of proficiency, many teachers again simply made a value judgement. Others made particular notes of some abilities, for example, Steven, Lloyd, Edward, Frank, Rosemary, Chris, Keith and Angela were said to be 'original' (yet for Steven "in examinations he tends to sacrifice originality to correctness of expression") whilst Johnathan, Nicholas, Francis, Owen and Alison were said not to be 'original' often basing pieces on favourite authors or television shows. Grammatical correctness and complexity of structure were generally favourably rated, yet Albert wrote incomplete sentences, Frank evidenced poor sentence structure, Ernest wrote 'short' sentences and Jill only 'simple' sentences. Poor punctuation seemed to cause concern (Frank, Anna, Malcolm, Amanda) in only a few cases and poor spelling was noted only twice (Don and James).

Seventy per cent of the teachers considered that the children 'enjoyed' writing despite the fact that 38% were said not to write at length, and that most (68%) had never voluntarily presented written work executed outside school.

5.4 Overview

Clearly concern for 'writing' can be divided into several categories - a concern about graphic accuracy and neatness, or the nature and quality of the content or the grammatical correctness of the final expression. That graphic facility and technical excellence are dominant concerns in many of the teachers' and children's minds is clear. This may indicate a need to readjust priorities in order to direct attention to the soundness and originality of ideas and their adequate expression. An inability to express ideas or to 'think of something to write' causes frustration which builds further barriers to adequate expression in the future.

Just as 'talking' is something children are expected by teachers to do spontaneously, so are reading and writing skills considered 'gifts' which children either do or do not possess. In fact all three areas require skilfull, specialised and careful handling both as separate abilities and as integral parts of the total language profile of each child. Thus children who have difficulties in some or all aspects of writing need to be provided with alternatives - a *different kind of writing* (lists of research findings rather than the usual "essay", for example) or even transference to the oral mode. The latter is neither spontaneous nor without difficulties,for children need to be guided to effective oral expression just as they do in reading and writing skills. Above all, though, they need to be allowed to exercise and practise 'the spoken alternative'.

SECTION EIGHT

A SURVEY OF THE COMPLEX INTERACTION OF SOCIO-ECONOMIC, MOTIVATIONAL AND PERSONALITY FACTORS AND THEIR EFFECT ON LINGUISTIC ACHIEVEMENT AND SCHOLASTIC SUCCESS

1. Introduction

Sections Six and Seven have examined in considerable detail the characteristics displayed by the subjects in the writer's study groups, in reading, writing and talking in response to a variety of stimuli. Inherent within the exercises were attempts to provoke the enactment of higher cognitive processes such as analysis, synthesis and evaluation. The programme was also designed to encourage abstract and logical thinking. Standardised tests in language were administered in an attempt to confirm or contrast intellectual ability with potential or actual linguistic ability. The present section proceeds beyond this point to consider some of the possible influencing factors behind the linguistic (and thus often scholastic) performance previously described.

Some parents are more interested than others in the developmental, intellectual and other successes of their children. The degree to which this parental interest is a product of socio-economic factors or of parental educational level is not easy to determine although much has been written on the topic. What has been written often concerns the disadvantages suffered by 'working class children' or by children from minority groups and their apparently-related poorer scholastic achievement. Craft (1970) points out that working class children have lower educational and occupational aspirations whilst Robinson (1976) highlights the association between poverty and school underachievement positing a need either to change the criteria for educational success or to develop an alternative track. Floud (in Craft 1970) suggests that children of different origins but with a similar level of measured intelligence will respond differently to school.

Less attention has been paid to the effects of the complex personality and experiential factors which determine the unique inter-personal relationships of the family unit and which often influence the way a parent feels about a child. Even less has been written about the result of intense parental influence and stimulation in early childhood.

Pre-school stimulation may take the form of the provision of toys of an educational nature, the opportunity to experience multiple and varied situations and especially the provision of an environment saturated in rich language experiences. As has become increasingly clear in recent research, (Barnes *et al*, 1974) it is a child's linguistic ability which, to a large extent, predetermines success or failure in the verbally orientated school arena.

This section will attempt to unravel some of the multiple and complex factors which serve to determine a child's linguistic facility and thus also his scholastic success. These are especially relevant to the topic as

> the language arts probably are the area of greatest importance in the school life of a young child with unusually high ability, for it is through the language arts that the child enjoys the delight of learning in nearly all fields.
>
> (Martinson 1968, p. 78)

2. THE PRIMARY ROLE OF THE HOME

Not only are children dependent on their parents to supply physical necessities but even their future life styles and opportunities are "distinctly affected by the sort of family into which (they are) born" (White 1977, p. 18). That certain conditions are advantageous and others disadvantageous is beyond doubt. Exactly which stimuli aid developmental potential is more difficult to determine. White (1977) posits emotional security and therefore "consistent interaction patterns" as essential. The latter need to include "Demonstrations of affection, opportunities to play, encouragement for verbal and physical exploration, and the stimulus of conversation and other symbolic communication with adults and peers" (White 1977, p. 19). Dale and Griffith (in Craft 1970) also stress the importance of "a good supporting home background for the satisfactory academic progression of children" (p. 85).

Adult models, especially the parents, constitute the main source of learning by means of imitative and internalised learning. The richer the parents' experience, the richer the possibilities for learning offered to the child and the closer the match with the wider social milieu the easier it is for the child to "associate --- family life norms with the demands of wider social interaction" (White 1977, p. 20).

Despite the fact that "the factors that govern the achievement of superior performance may be even more idiosyncratic than those determining shifts at other levels of the scale" (McCall *et al* 1973, p. 76) certain generalisations can be made about the influencing role of the home and about its role in determining language proficiency. The home establishes the basis of language patterns both in speech and in attitudes to the written word.

Douglas (in Craft 1970) has noted the effect on test scores and scholastic progress in general, of parental interest. Majoribanks (in Eggleston 1974) stresses the need for greater teacher involvement in adult education to manipulate environmental characteristics such as "Parental expectations for the eductation of their children and for themselves, the language environment of the home, the use of books and other literature by the family, and the productive use of leisure time" (p. 74). Moore (as cited in M Call *et al*, 1973) would probably affirm the value of such action having shown "positive relationships between general I.Q., vocabulary, comprehension, and reading ability on one hand with measures of the home climate on the other.

An assessment of the quality and degree of intellectual stimulation afforded the children in study Groups A and B confirmed that they enjoyed a considerably enriched environment[1] and should thus have been at a considerable advantage upon school entry. According to responses to a questionnaire 79% of the parents 'encouraged, fostered and forwarded' intellectual skills at this level whilst 95% admitted to 'consciously exposing the child to educational toys, books and experiences'. All the children were fortunate in having parents who read to them. They possessed a considerable number of books and were encouraged to use the library at an early age. Many were consciously taught the concepts of size, shape and colour and were given educational toys to reinforce these concepts. Only one child was taught the alphabet and phonetics (Jill). Almost all were denied 'baby talk' and were spoken to in full and complex sentences from birth. The ultimate in stimulation is perhaps described by one mother who stated her children's early learning experience in terms of a '24 hour learning day' (Steven and Rose). The facilities provided involved considerable financial outlay - an average of over R200 per child per annum for educational outings, extracurricular activities and educational toys.

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1) 'Une famille éducogène' as the French would term it.

Such intense intellectual stimulation has variously been reputed to increase I.Q. scores and the level of performance (Mc Call *et al* 1973, p. 67), make the able "more able" (Gowan and Demos 1964, p. 27) and even "lower the age at which developmental readiness for a particular task takes place" (Gowan and Demos 1964, p. 27). Gowan and Demos (1964) in fact, accuse Piaget, on whose work most of our assumptions about the suitability of various tasks for clearly defined age levels rest , of neglecting "the effects of the quality of stimulating educational experiences on the maturational level of the child" (p. 27). They also consider that Piaget gave insufficient attention to "superior mental ability, socio-economic status, personal adjustment or teaching skill" (1964, pp. 27 and 28) as factors likely to speed up developmental stages.

If then, the children in the study groups can clearly be seen to have enjoyed a pre-school environment rich with opportunities for fertile minds to discover and explore - an environment filled with books and a positive attitude to intellectual pursuits - one must look elsewhere for the root causes of the negative attitude to school, poor motivation and achievement and unimpressive oral and written output of many of the children.

Other factors which may cause a discrepancy between potential and actual performance include genetic disorders such as specific learning disabilities, poor motor co-ordination, visual defects, poor powers of concentration, and a large imbalance between verbal and non-verbal powers. These factors together with those resulting from personality traits and feelings of emotional insecurity must obviously be considered in detail as they affect particular children. Other factors such as desciplinary patterns, and the role played by the financial and intellectual status of the parents can be commented on in general.

3. SOCIO-ECONOMIC STATUS

3.1 Parental Occupation

Certain combinations of socio-economic factors may tend to increase the incidence of children who score well on I.Q. tests. Gallagher, (1975) in fact, estimates the percentage to be more than three or four times the average "in a good environment such as a highly favoured socio-economic suburban area of a large city" (p. 12). Laycock (1979) is in agreement and states that "surveys nearly always find that children with high scores come disproportionately from homes that have some accepted economic or cultural advantage" (p. 36).

The approximate incidence of children by Binet's I.Q. standards can be tabulated as follows:

		% in average community	% in high socio-economic area
Highly Gifted	148+	.1	.3 to 1
Gifted	132+	2	6 to 10
Academically Gifted	116+	16	30 to 50

Figure 22 : Approximate incidence of children according to Binet's I.Q. standards (Gallagher 1975, p. 11, Table 1 - 4).

Similarities in socio-economic status and in I.Q. scores, however, are no guarantee of similarities in personality, motivation or academic achievement. As Mc Call has pointed out, "The current emphasis placed on gross between-family differences may have to give way to more complicated and more idiosyncratic environmental dynamics" (in Gallagher 1975, p. 76).

In the high I.Q. study groups 89% of the children had a parent or parents whose work would be classed as of a professional or semi-professional nature - lecturers, lawyers, bankers, surveyers and managers. The mean I.Q. of these children was 134 on the N.S.A.G.T. Twenty one per cent of the group had a parent or both parents involved in the teaching profession itself or in other specialist work with children - paediatricians, occupational therapists etc. The remaining 11% of the children had parents who were skilled workers - motor mechanics, cranedrivers and fitters, and these children (Patrick, Francis, Jean and Laura) averaged 133 on the N.S.A.G.T. None of the children had parents who were unskilled workers.

Fifty five per cent of all the high I.Q. children were first born, indicating the advantages said to be enjoyed by such children (Gowan and Demos 1964, p. 28). The children thus all belonged to a relatively privileged white middle-to-upper class social structure. Parental *interest* in school progress has, however, been reputed as more influential in academic success than the level of educational status and occupation (Pidgeon 1970 as cited in Laycock 1979, p. 160).

3.2 An Attempted Definition of Linguistic Success

There has been growing opposition to Bernstein's theory that children from different socio-economic backgrounds speak fundamentally different codes (Rosen 1972, Ginsberg 1972, Ryan 1971). Indeed Jackson in an article entitled 'The Myth of elaborated and restricted codes' (in Cosin *et al* 1977, p. 163 f.) proposes a fundamental reversal of theoretical stance during the course of Bernstein's writing and argues that, in fact, such 'codes' do not exist. Be that as it may, certain of Bernstein's hypotheses may be of value at least as starting points for discussion in the present study.

If, as he proposed, "children's strategies are only very weakly related to their measured intelligence" and if the working-class child's disadvantage is a social rather than a lingusitic one (1973

p. xiii) then the inverse may be true. The advantage possessed by the high I.Q. children in the study group has been clearly shown to be of a social nature but this may *not necessarily and inevitably* place them at a linguistic advantage.

Bernstein also stressed the role of the middle-class mother in providing a use of toys closely in harmony with experience in the infant school. Some of the children in the writer's study groups could perhaps even be said to have enjoyed 'mini nursery school' or 'junior primary training' at home and thus to have increased their ability and almost certainly "the opportunity to benefit from school" (1973 p. 21).

Clearly not all high ability children who speak "elaborated codes" avail themselves of this opportunity. Their greater understanding of abstract concepts, the greater flexibility in their thought may indeed make them more agile at responding to I.Q. tests, for these abilities are abundantly required in the latter, but may not make them linguistically more proficient in the common sense of the term. Superior cognitive ability and agility may not necessarily make them able to write coherently and at some length, spell correctly or express themselves in flowing, logically ordered, complex sentences.

Thus Bernstein's view of linguistic depression may not be balanced at the other end of the scale by linguistic superiority as an expected result of advantaged socio-economic status, at least when one considers the differences between *"actual* and *potential* linguistic ability" (Cashdan and Grugeon 1972, p. 100) so often found in the written and oral expression of the high I.Q. children in the study groups.

It may well be that these children had had their environment so governed during the early years as "to achieve a substantially faster rate of intellectual development[1]" (Gowan and Demos 1964, p. 28), had had access" to a greater range of educationally relevant knowledge" (Bernstein 1973, p. 70) and that their speech was, as a result, "more differentiated" (Bernstein 1973, p. 9), but the writer feels that this, in itself, does not justify Bernstein's label of "linguistic success" (1973, p. Xvi).

The writer would like to define linguistic success for a bright eight to eleven year old as 'a spontaneous, joyous and natural desire to speak and write at some length on a topic of interest, or in response to novel stimuli in an original and logical manner. Written expression should display a reasonable ability to spell correctly, a knowledge of the conventions of punctuation and acceptable usage. Speech should be fluent, convey the desired meaning with ease and show some sensitivity to the effects of rhythm and rhyme'. Children who display few of these abilities can hardly be said to be shining examples of 'linguistic success'. Either we must neither expect nor desire such linguistic abilities in the intellectually able or we must take steps to close the gap between their actual and potential linguistic ability.

4. MOTIVATION AND DISCIPLINE

4.1 Responses to Some Questions Based on the Modified Fels Parent Behaviour Scale

Discipline in the home has several ends, to dissuade the child from what the parents consider to be negative or anti-social behavioural patterns, to encourage the child to achieve greater success in a particular sphere or even merely to serve as an outlet for parental aggression and authoritarianism. As the nature of discipline may affect how a child feels about himself and is related in a complex way to motivational attitudes, it is necessary to consider what type of discipline had been exercised on the children in the study groups. Mc Call *et al* (1973, p. 67) propose that "the environment associated with optimum I.Q. profiles seemed to be one in which the parent encouraged and attempted to accelerate intellectual behaviour, but in a context of moderate structure and discipline".

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[1] This is clearly indicated by the superior I.Q. scores.

On the basis of information concerning parental behaviour patterns of high I.Q. and middle-class orientated children, the writer was interested in the handling and motivational patterns found in groups A and B. In order to establish these, questions based on a reduced Fels Parent Behaviour Rating Scale were put to the parents (Roff, M.A. Factorial study of the Fels Parent Behaviour scales. Child Development, 1949, 20, p. 29-45 as cited in Mc Call *et al* 1973, pp. 52 and 53).

As predicted by Mc Call *et al* (1973), the majority of the high I.Q. children in the study groups enjoyed guidance within a "moderate structure and discipline". Yet 16% (Johnathan, Francis, Dale, Rosemary and Alison) suffered from unpleasant, repressive or insecure home environments, 8% were highly circumscribed in their behaviour by numerous and severe requirements whilst 18% had to exercise a great deal of discretion within a framework of excessively mild requirements, 16% (Arthur, Johnathan, Francis, Edward, Rosemary and Ernest) suffered severe penalties with some evidence of fear or personal resentment whilst 8% (Frank, Keith, Angela) could indulge in fairly gross misbehaviour and receive only verbal remonstrances. Eleven per cent of parents (those of Arthur, Sean, Alison and Malcolm) issued commands and displayed a high dictatorial quality whilst only one parent avoided coercion completely. As has been indicated earlier in this section almost all parents made attempts to accelerate behaviour and deliberately train the children in mental and motor skills.

None of the parents felt that they neglected their children whilst 21% felt themselves guilty of overprotection. Twenty-one per cent of the children were, likewise, subjected to excessive verbal criticism and blame and a corresponding lack of approval and praise. Thirteen per cent of the group were denied physical affection.

Whilst these percentages are indeed low they are yet of interest in a group of children from the upper levels of the socio-economic stratum who had apparently received considerably concerted efforts at acceleration from their parents. The parents were obviously using a variety of means to constitute extrinsic motivation. The conversion of this to intrinsic motivation was not necessarily assured. All the parents stated 'success' of one sort or another - occupational, material, familial - to be very important in their lives. Yet 55% thought that their children did *not* consider success as important. Here then may be a conflict of interests. Some parents who were success orientated, had expended a great deal of time, effort and money on the intellectual acceleration of their children were disappointed with the result. The teachers were in agreement, with 74% of the children not considered to be achieving at their peak. The children were aware of their parents' desire that they should achieve, for 90% of them stated that they 'worked hard' to please their parents. Yet, more children in the high I.Q. group seemed concerned with the importance of the self-satisfaction that success brings and they were also more concerned to show their prowess to other children than were those in group C.

4.2 Poor Ratings on the Questions based on the Fels Parent Behaviour Scale

Eighteen per cent (Anne, Francis, Dale, Rosemary, Arthur, Paul, Johnathan) of the high I.Q. children were affected by three or more negative disciplinary patterns which occurred in various combinations, for example an insecure home atmosphere, together with high penalties, a great deal of verbal criticism and an overprotective attitude. Three (Edward, Paul, Anne) of the children had the added disadvantage of not being the favourite child in the family. None of these children was considered to be achieving at his or her peak at school, only one was thought to be success-oriented by parents and yet all of them believed themselves to be working hard to please themselves and their parents. All but two of these children had been referred to the School Psychological Services for behavioural or scholastic problems.

This suggests that Gowan and Demos (1964) were correct in suspecting "gifted children (to be) more in need of psychological guidance than the average child" (p. 48). Work by Angelino and Shedd using the Rosenzweig Picture Frustration Test confirms that, "high intelligence may not help the individual meet everyday situations any better than the average person does" (cited in Gowan and Demos 1964, p. 48). All but one of the children listed above were described as having difficulty communicating with peers. Despite the smallness of the sample, the writer feels justified in stressing that the effects of inconsistent, lax or over rigorous discipline in the home should not be underestimated.

Some children not subjected to more than three adverse disciplinary measures were, however, affected by a particular combination of the stated dimensions; for example few restrictions and no penalties might be presumed to affect motivational drive as in the case of Frank, Keith and Angela. Twenty six per cent of the children were described by their teachers as achieving at their peak (Melissa, Louis, Alison, Anthony, Anna, Ernest, Jean, Laura, Steven and Rose). None of these had three or more negative disciplinary traits inflicted on them[1] and seven had moderate scores on all ten dimensions.

Freeberg and Payne (1967, p. 65-88) came to the conclusion that, "Children of superior intelllectual ability came from homes where parental interest in their intellectual development is evidenced by pressures to succeed and assistance in doing so, particularly in the development of the child's verbal skills" (as quoted in McCall *et al* 1973, p. 65). The writer would like to suggest this qualification: incorrect handling (i.e. too much or too little pressure, little affection, inconsistency and overprotection) may hamper a child with superior intellectual ability from using his ability to the full, and this may contribute to emotional and interpersonal problems (see also White 1977, p. 21). These are often manifested in a reticence to communicate orally in class and may even inhibit the ability to speak freely, fluently and with ease. Of the seven children (the 18%) affected by incorrect handing, most showed signs of reticence to communicate orally in some areas and one child displayed an almost complete breakdown in all areas of communication.

These children, then, spoke to the teacher only when necessary yet were able to communicate fluently when they did so. They seemed to lack the usual childhood desire to chatter to the other children in class and had difficulty relating to their peers.
It is, of course, difficult to separate cause from effect in such cases. Inappropriate handling may affect self confidence, cause tensions in relationships with others and thus inhibit speech. On the other hand a reticence to speak and participate may affect standing in the peer group and thus adversely affect self-confidence. What is certain is that "academic underachievement appears to be a symptom of more basic personal and social problems" (Laycock 1979, p. 310).

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1) These data substantiate Gowan and Demos' (1964), finding that achievers had been subjected to acceptance, democratic control, clear goals and good examples set by the parents themselves (p. 306).

5. THE ROLE OF MOTIVATION

5.1 Introduction

Increasing attention is now being given to "non-intellectual supports, like motivation, that are required for full development of the personality" (Laycock 1979, p. 44). Motives, no matter how diffuse, vague or difficult to define they may be, provide a driving force for action and thus also for learning. As a large percentage of the high I.Q. group (74%) were considered by their teachers not to be achieving at their peak academically, it is necessary to consider some possible reasons for their apparent lack of motivation. Terman was extremely disappointed that any significant number of his 'termites' should fall short for they all had enormous potential. The least successful were shown to score lower "on the indications of motivation that distinguished those who were successful" (Laycock 1979, p. 44).

All children are driven by certain basic needs - a natural curiosity, the need to affiliate with the community (called "the affiliation motive" by Thompson 1971, p. 115), or "the wish for relatedness" Young 1960, p. 26) and the need to assist oneself - to act in particular ways. It seems reasonable to suppose that other related factors such as interest, the need for competition, success, parental influence and teacher behaviour may play a greater role than usual in motivating a child of high ability.

5.2 Interest

The majority of children with high I.Q.'s in the writer's study groups were seen by their teachers as enthusiastic about their general schoolwork (61%) and also about language activities (63%). The remainder (Faul, Anne, Arthur, Johnathan, Albert, Patrick, Don, Charles, Francis, Dale, Edward, Frank, Anna, Jill and Jean), (38% and 37% respectively) who appeared unenthusiastic and disinterested were, in the writer's opinion, a cause for concern. More than a third of the children in this privileged, high potential group apparently showed little enthusiasm in the classroom. Half of those read little or were non-readers, 40% appeared to be affected adversely by parental handling, 40% had emotional problems, (noted by their teachers) 47% were uncommunicative and had difficulty relating to peers, 11% had a large imbalance in favour of non-verbal abilities and all but one were considered by their teachers to be achieving at a level below their capacities. These unenthusiastic and underachieving yet high potential youngsters were clearly affected by a complex interaction of linguistic and disciplinary factors which seemed to result in social, emotional or personal maladjustment, and thus also, it seemed, in a lack of interest in school and a resultant failure to achieve their true potential.

The complexity of the above data clearly demonstrates a need for specialist training for all teachers of children with high potential, in order to increase awareness of the severity of the problems, both personal and scholastic, faced by such children. Hollingworth's approach may have considerable merit; "she spent much of her energy urging bright children to be sensible and their teachers to be sensitive" (cited in Laycock 1979, p. 29).

As a group the high I.Q. children displayed wide and multiple interests, most (76%) were avid readers, many were accomplished sportsmen and women, played instruments, enjoyed art and built collections. When asked their main interests at school, all but 16% included academic subjects but they showed an interesting preferance for mathematics and the sciences (68%) as opposed to 'English' or even specific aspects of language such as spelling, composition and reading (37%). And this despite their intense love of reading described earlier (many spent 20-30 hours a week reading for pleasure) and their apparent preference for reading above television watching (an average of 13 hours per week, as opposed to 8 hours in front of the T.V.). Either many of these children found the sciences more interesting and challenging than 'language study' as taught presently in Natal, or they had difficulties in the language skills which tended to lessen their interest. Some children possibly experienced both problems. The Natal English Syllabus together with the Guidelines for its implementation will be considered in the light of the techniques employed by the teachers of those in the study groups in the final section.

5.3 Competitive Spirit and Challenge in the Classroom

"A pupil from whom nothing is ever demanded which he cannot do, never does all he can" (Laycock 1979, p. 5). If a child with superior intellectual ability has few others of similar ability to compete with and a teacher who provides few challenges, he is unlikely to experience success as a personal reward. He may satisfy basic requirements but is this enough? The fact that the teachers of 74% of the high I.Q. children under consideration felt that their charges were not achieving at their peak suggested that they would have replied in the negative. Terman, "held the schools responsible for a great deal, especially when they did not interest his pupils or sustain their efforts. He was intensely proud of what his "termites" did and deeply disturbed by unnecessary failure" (Laycock 1979, p. 42). It was interesting to consider the attitude of the teachers involved with the children in the study groups towards the provision of stimulating and special challenges, and then to make some assessment of the extent to which these were being provided.

Eighty-two per cent of the parents of the high I.Q. group considered that their children were well adjusted to school and to their teachers. Of the remainder, 18% (Anne, Albert, Charles, Dale, Owen, Edward and Graham) were not considered well adjusted to school and the same percentage did not relate well to teachers in general. Albert, Charles, Dale, Edward and Graham were seen to display negative feelings to both school and teachers. These figures were substantiated by the children themselves. Ninety-five per cent considered that the teachers liked them (Patrick and Maria being the exceptions). Ninety per cent liked their teachers (i.e. excepting Arthur, Johnathan, Patrick and Albert). In response to the open question:
"My teacher thinks of me as ...", the high I.Q. children considered the teacher's image of them to be largely favourable (71%) whilst only a third of group C felt this way. Half the high I.Q. group attributed this to positive academic factors i.e. they thought they were seen as 'clever', 'hard working' and 'good at school subjects', and 23% attributed it to favourable personality traits. Almost half of the children in group C considered themselves to be viewed unfavourably and a further 13% thought they were seen as 'ordinary' or 'medium' - a total of 60% in these two categories.

In conjunction with other data obtained, these figures suggest that it is the teacher who most clearly conveys to the child an image of his or her relative academic status. Both parents and children tended to gauge the children's value in terms of personality factors and did not convey an image of predominantly academic self-esteem.

The teachers were indeed aware of the intellectual ability of children in the high I.Q. groups. Thirty-nine per cent were described as "intelligent", "above average", "bright"; 40% as "well above average", "highly intelligent", "Gifted", "Extremely Gifted"; whilst 21% (Paul, Johnathan, Albert, Patrick, Don, Graham, Hugh, Joan) were rated as "average". Yet 95% of the children were expected by their teachers to complete university, with reservations expressed about Johnathan and Anne ("she may drop out") and Graham ("If he can overcome his emotional drawbacks"). Two children(Partick,NSAIS V. 113, N.V. 148 T. 131 and Jean NSAIS V. 142, N.V. 139, T. 140)were expected to reach matriculation only.

To sum up then, the majority of the children were seen as well adjusted to their schools and teachers, liked their teachers and were liked by them, were seen as intelligent and expected to achieve academically in adult life. Why then did teachers have the feeling that 74% of them were not achieving at their peak? Indeed many were not even achieving in relation to the rest of the class. Fifty-eight per cent were rated as above average in this respect, 24% as only average (Anne, Johnathan, Patrick, Dale, Edward, Anna, Keith, Hugh, Joan) and 18% as below average (Albert, Charles, Frank, Lloyd, Graham, Amanda, Jill). Lloyd's teacher made a revealing statement, "With work relating to his own intellectual level he performs well above average, but otherwise his performance is low". Here then may be the key - a consideration of the level of teaching appears necessary. Seventy-two per cent of the children considered that the teacher set a 'fair' standard but then 87% of the children in group C did, too. Only 15% of the high I.Q. group thought the teacher expected too much of them (Anne, Arthur, Johnathan, Don, James, Owen) and 13% too little (Maria, Malcolm, Lloyd, Patrick, Dale). The children were clearly quite happy to work at a 'fair' standard and despite the fact that the teachers were aware of this they did little or nothing to remedy the situation. Eighty-one per cent of the teachers did not provide the children with speical activities and 79% never exempted a child from activities in which he or she was already proficient.

The teachers were teaching at the average child and obtaining average results. They displayed little surprise that for example Don (NSAIS V. 135, N.V. 135, T. 139) was "average in his class and does not display any special talents", and was not "proficient at any subject or section thereof" or that Patrick (NSAIS V. 113, N.V. 148, T. 131) "does not finish his work, has no time for extending activities". Those teachers who did provide special activities saw "harder work cards", "more difficult maths" and "harder projects" as a solution. There was no evidence of specialist teaching techniques or means of evaluation, merely a succession of isolated tasks, as Ernest's teacher put it, "There is always a new activity for him to complete when he is finished".

Margaret Donaldson (1978) states a very important part of the teacher's job as, "to guide the child to tasks where he will be able objectively to do well, but not too easily" .... (p. 114). If teachers are unable to do this, considerable underachievement may occur in those with high academic potential. Yet are teachers to blame? They have received no special training in this complex area, have no influence over the "severe personality maladjustment involved in underachievement" (Gowan and Demos 1964, p. 297) and no control over the "idiosyncratic interaction of specific environmental events with the skills and motivational dispositions of the child at the time" (Mc Call *et al* 1973, p. 76). Thus, in order to obtain a clearer picture of the possible reasons for the somewhat disappointing results stated above, it will be necessary to look at the way the children see themselves, their abilities and the world around them.

6. THE ROLE OF THE SELF-CONCEPT

6.1 Introduction

Williams and Cole (1968) state that, "Few factors are more fundamental to a child's success and happiness than his evaluation and acceptance of himself" (p. 480). In fact many have viewed the self-concept as central to man's behaviour as a whole. In more specific terms, a positive relationship between the self-concept and academic achievement has been noted (Bruck and Bodwin, 1962; Walsh, 1956); Levy (1956) postulated the child's conception of school as an extension of his self-concept. Brookover *et al* (1966), proposed positive feedback from "significant others", such as parents and teachers, as influential in establishing a positive perception of self-ability and school achievement in the child. Williams and Cole (1968) would include communication from the peer group as a "decisive determinant of both self-evaluation and achievement" (p. 479).

The concept of self in adulthood is achieved after years of complex interactive processes with others and with the environment. The movement is cyclic, for our view of ourselves colours our social and intellectual proficiency and the latter influences how we feel we relate to and rank amongst others. Yet, "when it comes to self-esteem, not even a young child depends entirely for his judgments on the views of others. For he can often see quite well for himself how he is doing" (Donaldson 1978, p. 114). Mc Michael, (as cited in Donaldson 1978, p. 114) in a study concerning the relationship between early reading skills and the self-image, concluded "that there was a good deal of objective truth in the children's assessments of their competence. When they agreed that they were not able to do things as well as some other children they were admitting to a reality".

Gallagher (1975) cites numerous research projects to support his contention that "there is little or no question about the general social status of high I.Q. elementary level children. It is high" (p. 33). The Plowden report (1967) suggested, however, that the 'bright child' may "not feel at home with his contemporaries and ... may not be accepted by those who are older" (p. 306). The children in the study groups were asked to state how they saw themselves, how they would rate their abilities with those of other children and how they thought others saw them.
The writer was then able to weigh up the characteristics stated as predominantly positive or negative and as thus constituting a positive, negative or contradictory self-image. These data are especially relevant in the light of findings that "academic success is one of the factors that raises people's self-esteem" (Coopersmith as cited in Van den Aardweg 1975, p. 163).

6.2 Esteem in Relation to the Peer Group

Ninety-five percent of the high I.Q. group and 93% of the children in group C considered that they were liked by the peer group. This was not entirely substantiated by the teachers of the children in the high I.Q. group, who considered 34% to have few friends at school.

When asked to complete the open question "other children see me as ......" almost all the children stressed the importance of personality factors in relationships with other children. The lack of stress on academic factors was interesting, especially the nil return displayed by group A. This response may reflect the negative attitude to school and thus to academic factors in general displayed by group A.

As would be expected, a larger percentage of the high I.Q. group considered other children as generally "worse at most things than I am" than did those in group C where a greater percentage saw others as "better at most things than I am".
of children, however, indicated an identification with the achievement and performance level of the peer group, perhaps substantiating the writer's earlier contention that teachers teach, and are seen to be doing so by children, towards the *average* performer.

6.3 The Family

The majority of the children in all three groups considered that their parents saw them in terms of positive and negative personality factors and not in terms of intellectual ability [1]. None of the children in group C offered dual answers, for example 'naughty sometimes but mostly good' whilst 23% of the high I.Q. group thought this applied to their father's view of them and 28% to their mother's. This bears out the often noted ability of high I.Q. children to analyse their characters and to "see into relationships" (Hoyle and Wilks 1979, p. 12). The Plowden Report (1967) noted that , "self-criticism, beginning usually with criticism of others' work, often develops early" (p. 306) in such children.

It is clear from the data obtained that sibling relationships are seldom straight forward, the children in group C were fairly evenly divided between those who thought that their siblings saw them in a positive light and those who thought the opposite. More of the high I.Q. group children than those in Group C thought that they were viewed negatively. Yet only 11% of the parents (Johnathan, Sean, Dale, Edward) stated their children to be poorly adjusted to siblings. A small percentage of the high I.Q. group thought that their siblings viewed them in academic terms.

6.4 The Self

Only one child (Johnathan) said that he did not like himself most of the time. Seventy-three per cent of the children in group C chose the slightly less positive choice ("I quite/sometimes like me") and double the number in Group B, compared to Group A, chose the the more positive choice ("Most of the time I like me"). Nine children in Group A (Anne, Arthur, Roy, Albert, Nicholas, Don,

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1) Seven per cent of Group C fathers and 13% of mothers whilst the figures for the high I.Q. group were 8% and 5% respectively.

Charles, Dale and Alison) had been referred to the Association for Gifted Children by the School Psychological Services, having been considered as children in need of therapy for various behavioural/scholastic problems. It was thus likely that there should be a higher incidence of negative feelings about the adequacy of the self amongst this group.

When responding to the question "I think of myself as .....", more than twice the percentage of high I.Q. children saw themselves as possessing *positive* factors - these being predominantly *personality* traits -- almost three times the number of those who chose positive academic traits. None of the children in this group spontaneously saw themselves in terms of future occupations although 79% had a clear vocational plan or goal[1]. All except four of these children (Arthur, Johnathan, Hugh, Jill) chose exacting yet traditional professions likely to be within their reach (teachers, doctors, engineers, scientists, a 'legitimate businessman'!). The girls revealed an interest in traditionally feminine occupations - teachers and nurses. Only one wished to become a doctor and one a scientist. This reflects society's stress on such occupations as 'suitable' for women and could strengthen a plea for early and extensive vocational guidance for girls[2] with high potential in order to interest them in a wider field of activities and thus ensure greater personal satisfaction and a greater contribution to society in adulthood.

When asked to state their best and worst points, Group B children revealed a certain modesty in a high percentage of 'no response', perhaps because it was their first encounter with the writer and

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1) Nason, (as cited in Kerry, undated, p. 10) states this as one of factors which encourages bright pupils to achieve.

2) And also, of course, for boys.

with any such extra-curricular activity. They were noticeably more interested in and more adept at sport. Group A children revealed a predominance of positive personality factors. Their reluctance to state their best points in terms of academic factors probably reflects their teachers' views that the majority possess high ability and yet underachieve in terms of it. The fairly substantial number (53%) of children in Group C who included positive academic factors in their lists may again be suggestive of the teacher's tendency to teach at a level best suited to those of 'average potential'.

The children in group C often stated a combination of personality and academic factors as disadvantageous; 'I don't like doing dishes School work Afrikaans English and me and my brother always fight'. Other comments from this group related to academic matters included 'shouting out in class', 'irritating the teacher', 'untidy writing', merely the word 'schoolwork' and the rather poignant sentence 'I am not too intelligent'. All the children in group C felt that there was room for improvement whilst 17% of group A and 25% of group B were content with their images. In the areas of desired improvement the pattern was consistent with the figures given above - group A children desired improvement in the area of personality factors and group B and Group C favoured academic factors.

6.5 Overall Assessment

When all the above factors are weighed up, one is able to see fairly clearly which children saw themselves (and thought others saw them) positively, which negatively and which in a dual light (i.e. where positive and negative factors were almost equal).

It would seem then that more of the high I.Q. children suffered conflicting and negative feelings about themselves than did those in Group C.

7. UNDERACHIEVEMENT

7.1 General Characteristics

Generally the bright underachiever is male (Gowan and Demos 1964, Kellmer Pringle 1970), may have a mother who is fairly lenient in demands for the early accomplishment of tasks (Drews 1957) and may be first-born of well-educated parents, who tend to handle him inconsistently. He may be less concerned with educational progress than are his parents (Kellmer Pringle 1970).

General descriptions such as the ones above are unlikely to fit any particular child with ease. They do however provide some guide for teachers in the timely identification of such children. As any child will deviate markedly from a set description so the causes of underachievement in bright children are likely to be complex and individualized. Once again, however, certain generalisations can be made. Although everyone may display temporary maladjustment at times due to jealousy, insecurity or similar difficulties, the maladjusted underachiever may tend to display reaction in an intensified form.

Maladjustment tends to manifest itself in a general apathy and lack of interest which subsumes superior potential. Its causes may be multiple, multidimensional and interrelated concerning the family, the personality or social interaction.

The 'non-achievement syndrome' may consist of general self-depreciation, no clear goals, vulnerability and depression, poor parental relationships, lack of insight, and free anxiety (Roth, in Gowan and Demos 1964). Although bright children are said to possess superior emotional adjustment (Dunn 1973, p. 211) some have difficulty in finding satisfactory peers and in coping with authority. Such difficulties may engender attitudes of rebellion, contentiousness and general cynicism. Anxiety and feelings of isolation and shyness may result (Dunn 1973). Thus personal, familial or social maladjustment may manifest itself in nervous, habitual or behavioural disorders (Kellmer Pringle 1970) and contribute to the profile of the underachiever suggested by

Kerry in the Nottingham University School of Education, Teacher Education Project Trial Materials. Thus he or she may be anti-school, apparently bored, restless or inattentive, absorbed in a private world, tactless and impatient of slower minds, excessively self-critical, unable to make social relations with peer groups and/or teachers, emotionally unstable and outwardly self-sufficient *but also* creative and persevering when motivated, quick to learn, able to solve problems and ask provocative questions, given to abstract thought and responsive to inventive, open-ended questions and activities. On the contrary, however, Gowan and Demos (1964) cite instances to support the theory that the underachiever may perform as he does through lack of creativity rather than through lack of motivation.

7.2 Implications of Underachievement for Linguistic Expression

Since teachers tend to rate the children who are most expressive most favourably, endowing them with higher ratings in cognitive ability (Gallagher 1962), children who express themselves poorly, either in oral or written form and, perhaps as a result of the type of maladjustment described above, may be labelled 'average' or 'below average' by the teacher who thus unwittingly reinforces the under=achievement syndrome.

Kellmer Pringle (1970) suggests that the bright underachiever is average in reading and weak in spelling. Kerry (undated publication described above) classes them as, "orally knowledgeable but poor in written work". Not only do such children fall short of potential achievement in terms in their intelligence quotient scores but do so even in terms of average ability scores.

Labuda and James (in Barbe 1971) emphasise that some children of normal or superior intelligence fail to learn academic skills because of significant deficits in perception, conceptualization, or verbal/non-verbal expressive abilities. Their subjects were reputedly curious about their world, displayed certain specific or creative talents and were thus not referred for diagnosis in the face of evidence to suggest adequate or superior mental functioning. Many acquired poor attitudes to school or severe emotional disturbance whilst others masked [1] their problems. Even poor reading ability may be hidden by astute listening and rapid processing of ideas.

Gowan and Demos (1964, p. 304) note that non-achievers with high non-verbal scores are likely to be penalised within the traditional curriculum's stress on spelling and mechanics and that they may need a realignment of stress towards the spatial, numerical and other non-verbal abilities.

7.3 Profiles of Negative Traits for Achievers and Non-Achievers in the High I.Q. Study Groups

On the basis of the cited data on bright underachievers or non-achievers, the writer decided to consider the profiles [2] of the children in Groups A and B in terms of

a) poor rating on questions based on the Fels parent behaviour scale,

b) considerably higher non-verbal scores,

c) those noted as displaying signs of emotional disturbance by their teachers and

d) those said to be achieving at their peak at school.

Only five children (Roy, Sean, Chris, James, Amanda) said not to be achieving at their peak had one or no negative traits. Children in all the other groups showed a distressing combination of negative attitudes to schoolwork,their teachers, themselves and their peers as well as resultant (or causal?) designations as ʼaverageʼ or even ʼbelow averageʼ in class.

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1) For example by illegible writing to conceal poor spelling or the substitution of oral facility and artistic expression for other linguistic disabilities.

2) See pages 184 to 187.

The profile for the ten children rated as achieving at their peak is noticeably less negative, containing both a smaller variety of traits and less serious individual profiles.

7.4 A Case Study

Arthur's case may serve to illustrate the complex web of circumstances which surely affect scholastic and linguistic success.

Case Study

Arthur (Age as at 1.1.80: 9 years and 1 month)

N.S.A.G.T.				N.S.A.I.S.		
V.	N.V.	T.		V.	N.V.	T.
129	136	134		139	142	146
126	126	127	(School)			

Very slight non-verbal advantage. Initially keen but then reticent to use the tape recorder for he prefers to use diagrams, models and oral explanations as he "doesn't like writing as he can't do it neatly".

Attended 14 sessions

H.S.R.C English Achievement Test

Total percentile : 75
Spelling : 61

Notable - Accelerated - skipped standard one.

PROFILE OF THOSE WHO RATE POORLY ON THE FELS PARENT BEHAVIOUR SCALE

Child's Name	Teacher expects too little	Teacher expects too much	Designated Average by Teacher	Rated below Average in class	Rated average in class	Negative/Conflicting Self-Concept	Does not like Teacher	Teacher does not like child	Unenthusiastic about Schoolwork	Poorly Adjusted to Teacher	Said by parents to be poorly adjusted to school	Non-Reader	Non-verbal predominates in I.Q. scores	Said by parents to possess poor peer relationships	Said by teacher not to be achieving at their peak	Age as at 1.1.80
Paul			✓						✓				✓		✓	9
Anne		✓			✓	✓			✓		✓				✓	8.6
Arthur		✓					✓		✓	✓		✓		✓	✓	9.1
Johnathan		✓	✓		✓	✓	✓		✓			✓	✓	✓	✓	10.5
Francis									✓	✓				✓	✓	9.3
Dale	✓		✓						✓	✓	✓			✓	✓	9.7
Frank				✓		✓			✓			✓	✓	✓	✓	9.1
Rosemary						✓							✓		✓	8.5
Keith				✓		✓									✓	10.00
Joan															✓	8.11
Joan			✓		✓				✓						✓	10.6

70%

Figure 23 : Profile of those who rate poorly on questions based on the Fels Parent Behaviour Scale.

PROFILE OF THOSE WITH CONSIDERABLY HIGHER NON-VERBAL SCORES

Child's Name	Teacher expects too little	Teacher expects too much	Rated below average in class by teacher	Rated as average by teacher	Rated average compared to class by teacher	Said to be emotionally disturbed by teacher	Negative/conflicting self image	Does not like Teacher	Teacher does not like child	Unenthusiastic about schoolwork	Unenthusiastic about teacher	Poor Pals Parent Ratings	Non-Reader	Poor peer relationships	Said by teacher not to be achieving at their peak	Age at 1.1.1980
Paul				✓						✓		✓			✓	9
Patrick	✓			✓	✓	✓	✓	✓	✓	✓			✓		✓	8.6
Lloyd	✓		✓										✓		✓	10.6
Owen		✓								✓					✓	9.1
Frank			✓			✓	✓			✓		✓	✓	✓	✓	9.1
Rosemary							✓					✓			✓	9.8
Malcolm	✓														✓	9.11
Hugh				✓	✓	✓									✓	9.6

Figure 24 : Profile of those with considerably higher non-verbal than verbal scores in the I.Q. tests.

PROFILE OF THOSE CHILDREN NOTED AS DISPLAYING SIGNS OF EMOTIONAL DISTURBANCE BY THEIR TEACHERS

Child's Name	Teacher expects too little	Teacher expects too much	Rated below average in class by teacher	Rated average by teacher	Rated average in class	Negative Conflicting Self-Concept	Does not like teacher	Teacher does not like child	Unenthusiastic about schoolwork	Poorly adjusted about to teacher	Poor Fels Parent Rating	Non-Reader	Non-verbal predominates in I.Q. scores	Said by parents to possess poor peer relationships	Said by parents to be poorly adjusted to school	Said by teacher to be not achieving at peak at school	Age as at 1.1.80
Anna		✓			✓	✓			✓		✓				✓	✓	8.6
Patrick	✓			✓	✓	✓	✓	✓	✓			✓	✓			✓	8.4
Don		✓		✓					✓			✓				✓	11.6
Charles			✓						✓	✓				✓	✓	✓	10.6
Dale	✓				✓				✓	✓	✓			✓	✓	✓	9.7
Edward					✓	✓			✓	✓				✓	✓	✓	9.2
Frank			✓			✓			✓		✓	✓	✓	✓		✓	9.1
Graham			✓	✓						✓					✓	✓	9.3
Hugh				✓	✓								✓			✓	9.6
Jill			✓						✓			✓				✓	9.1
Nicholas														✓		✓	9.2
Alison														✓			11.1
Anthony																✓	9.5
Albert			✓	✓		✓	✓		✓	✓					✓	✓	8.11

64%

Figure 25 : Profile of those children noted as displaying signs of emotional disturbance by their teachers.

PROFILE OF THOSE DESCRIBED AS ACHIEVING AT THEIR PEAK AT SCHOOL

Child's Name	No negative traits	Poor peer relationships	Said to be emotionally disturbed by teachers	Rated average in class by teacher	Negative/conflicting Self-Concept	Non-reader	Unenthusiastic about schoolwork	Age as at 1.1.80
Steven	✓							11.4
Rose	✓							10.4
Louis	✓							10.10
Alison		✓	✓					11.1
Anthony			✓					9.5
Anna				✓	✓	✓	✓	10.6
Ernest	✓							9.8
Jean	✓							8.11
Laura					✓			10.5
Melissa					✓			8.10

Figure 26 : Profile of those described as achieving at their peak at school.

Development - All developmental milestones were reached early - he lifted his head soon after birth, walked at a year, uttered single words at three months and full sentences at fifteen months. He showed an early ability to memorize, reason and apply insight.

Social - He says that "playing with twits" bores him. He has few friends at school and prefers the company of older children. His parents are conscious of the need for him to make adequate social contact and thus often invite many children to play. He tends to lead play at home and quarrels if he can not do so. He says he often argues with his parents but displays a generally positive view of them and of the adult world. He appears restrained in class, talks seldom either to his peers or the teacher and generally appears to be 'too good', lacking verve and spontaneity.

Emotional - His emotional problems are manifested both at home and at school. His apathy at school is, he says, a result of boredom and at home he is noisy and troublesome if not profitably occupied. The fact that he is a non-reader could contribute to his inability to profitably fill the hours of the day. He appears to have a fear of failure, being reticent to enter any new field until such time as he knows he can master it. His father comprehends the complexity of his nature and sees the need to motivate him and encourage him to try - this over emphasis on the need to succeed may in fact prove to have a negative effect and serve to create greater instability. He has a notable sense of humour.

Intellectual - No particular efforts were made at pre-school intellectual stimulation although he had many educational toys. His attitude to school is negative1). Given the opportunity to rule the world he would 'abolish school'. He complains that all they do there is 'just copy from books'. This negative attitude is seen clearly by his teacher who says he is apathetic towards both general school work and language

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1) Acceleration did not improve his feelings about school.

activities, has good powers of concentration and works quickly but tends only to respond to extraordinary stimulation, being bored by ordinary class work. His creative work is erratic and he seldom asks questions. He has not found it easy to adjust to some of his teachers and says they expect too much of him (although he clearly seldom attempts to impress them). His problems at school may be aggravated by his tendency towards divergent thought as he says he likes to think out his *own* problems and solve them.

Extra-curricular - reflects his father's devotion to sport-wrestling, surfing, rugby.

Language - The teacher rates his language ability as 'good' in relation to the rest of the class although he writes briefly, is a non-reader, stumbles when he reads aloud, does not express himself in class or communicate with the other children and tends to speak too fast. He could not read prior to school entry.

Summary

Arthur achieves satisfactorily in a class of older children. He shows signs of emotional instability in withdrawal at school and difficult behaviour at home.

He has a completely negative attitude to school and some difficulty in relating to peers. He competes in demanding sports with older children.

He shows excessive desire to please/placate his father and thus his father needs counselling in sympathetic and reasonable handling. Arthur's language difficulties may stem in part from emotional distress resulting in an inability to communicate and nervous oral reading.

He needs an intensive language programme to encourage him to write at greater length, improve the physical act of writing and encourage him to begin reading for pleasure and information.

8. SUMMARY AND RECOMMENDATIONS

Several studies have considered language deprivation and poor scholastic achievement as factors related to adverse home environments i.e. to poor socio-economic backgrounds and to parents in unskilled occupations with little interest in educational matters. There are no in-depth studies, to the writer's knowledge, which attempt to measure the accelerated linguistic development and proficiency which may be expected to result from superior socio-economic background and intense parental interest. Bernstein's theory of 'restricted and elaborated' codes is interesting but may not necessarily be related to the actual written and oral linguistic output witnessed by the teacher.

Disciplinary patterns exercised by parents of the high I.Q. children studied, displayed considerable variety although most children enjoyed the "moderate structure and discipline" (Mc Call *et al* 1973, p. 62) said to be related to a high I.Q. All the parents in this group were success orientated although many of the children were not considered so by their parents or teachers.

Those children apparently subjected to inconsistent, severe or lax handling also displayed signs of emotional disturbance, difficulties in lingusitic and personal communication and were also described as achieving below their potential. None of the children described as achieving scholastically at their peak was subjected to poor handling. Thus, poor parental handling may play some part in emotional health, scholastic achievement and also in linguistic proficiency.

Teachers agreed that most of the high I.Q. children were not achieving at their peak despite their generally favourable attitudes to school and their wide interests both within and without the school buildings. These children stated a distinct preference for and superior interest in the Sciences and in Mathematics as opposed to the Language Arts, despite extensive home reading and its preference above television watching. Yet a third of the high I.Q. group showed little enthusiasm for school- and this as a result of a complex interaction of environmental and personal factors. Contributory factors could include the minimal provision of special facilities and the teachers' failure to provide alternative, differentiated and individualised work schedules as substitutes in areas where children were already proficient. There was some evidence to suggest that teachers aim their teaching at an 'average' level, expect merely 'satisfactory results' and that the high I.Q. children tend to identify with the mean performance of the peer group. This occurred despite the teachers' knowledge of their superior intellectual ability and of admitted high expectations for them in adulthood. Thus it may be concluded that there existed a lack of suitable teaching techniques and content of a suitably advanced level to challenge children with high academic potential and encourage them to superior achievement. The lack of specialist teacher training facilities in this field was notable.

It has been noted that academic success is an important component of a positive self-image and that high I.Q. children, although perhaps self critical, are able to form a fairly clear and objective self-image. All the children were more concerned with attributes of the personality than with academic accomplishments in their relationships with peers and the family. It may be that the high I.Q. group have more difficulty relating to siblings than other children do.

In general it must be noted that even the most favourable of home environments and potential ability may not guarantee either general academic success or superior linguistic proficiency. These are determined by the complex interaction of many intellectual and non-intellectual factors such as the effect of parental handling, an imbalance in verbal and non-verbal abilities, motivation, interest, interpersonal relations, feelings of adequacy, emotional disturbances and personality traits. Children exhibiting disabilities or disadvantages in several areas are surely in need of specialist guidance.

Those under-achieving, or not achieving at all, and who must surely experience personal suffering when functioning below their potential, may require a personalised combination of administrative, advisory and didactic strategies in order to avoid the cumulative and enduring nature of the underachievement syndrome. *Early identification of such difficulties is the crux of the matter for as time progresses basic skills and positive attitudes become increasingly difficult to restore.*

Homogeneous grouping or acceleration to a more advanced grade may increase interest and relieve boredom but the *inspired teacher* remains the key in a process which requires capitalisation on areas of interest and success to ensure confidence and further motivation. Praise, recognition and affection together with the setting of realistic standards remain the basic ingredients around which to mould special remediation techniques (especially in reading, spelling, writing and arithmetic) and personal counselling. For, as is clear from the case studies provided, each child's situation is a unique result of a complex, interwoven web of personal attributes and environmental circumstances.

SECTION NINE

OVERVIEW AND RECOMMENDATIONS

1. Introduction

Section Eight has provided some indication of the complexity of the underlying determining factors which result in a complicated environmental and personal framework within which children with superior measured potential either achieve scholastically and linguistically or do not. The present section serves both to overview the nature of provision for those children who possess superior potential, elsewhere and in South Africa (particularly in Natal), and to make recommendations on the basis of the researcher's findings.

2. SOME ASPECTS OF THE EDUCATION OF THE 'GIFTED' IN THE UNITED KINGDOM AND IN THE UNITED STATES OF AMERICA

2.1 Introduction

Brief consideration will be given in this section to the provision of special facilities for the 'gifted' in the United States of America and in the United Kingdom with a view to highlighting the present state of development in this field in South Africa. In both the U.S.A. and the U.K. the provision of funds and the prevailing attitude to the concept of giftedness are dependent to some extent on political and economic situations. It would appear, however, that in both countries there are now sufficient individuals, departments and other organisations interested in the topic to ensure its survival despite the vagaries of changing governments.

Both countries have legislation which provides either directly or indirectly for the educational needs of children with special gifts and talents - laws 93 . 380 and 95.561 in the U.S.A. for example. Likewise both countries have moved towards responsibility for provision at *local* levels with 75 per cent of the funds (6.28 million in 1980) going to states upon submission of a detailed plan in the U.S.A. (Sisk 1980, pp. 30 to 32) and the Local Education Authorities responsible for provision in their areas in the U.K. Thus in 1979 twenty-seven state educational agencies had gifted programmes in the U.S.A. (Sisk 1980, pp. 30 to 32) whilst in 1980 half of the British LEA's made some provision (Geddes 1980).

'Gifted' education remains, however, at present a field largely dependent on the enthusiasm, insight and resourcefulness of individual local authorities and ultimately upon the degree of these qualities displayed by individual teachers or groups of teachers.

2.2 The United Kingdom

Special classes for the 'gifted' have existed in Cleveland U.S.A. since 1920. The history of the movement towards special provision for those with academic and other talents in the U.K. is more recent but probably now of equal momentum and intensity (although of a rather different nature). The apparent 'lag' in the United Kingdom was probably due to the excellent provision by the academically orientated grammar schools which sought to stimulate and encourage those with academic gifts or potential. Their replacement by a comprehensive system has encouraged a broader based search for children with special needs at both primary and secondary levels.

In 1964 pioneering work with gifted children was begun at Brentwood College of Education in Essex (reported in Bridges 1969 and 1970). In 1966 the National Association for Gifted Children (N.A.G.C.) began to provide enrichment activities in the form of 'Saturday Clubs' and courses.

identification by the N.A.G.C. was, and still is, informal and largely a matter of interest on the part of the parents and children concerned (although most children have I.Q.'s of 135+). Parent counselling and sibling participation is an important part of the work. In 1980 the N.A.G.C. had forty-six branches in England and Wales catering for four thousand families. A grant is received from the Department of Education and Science, twelve L.E.A.'s[1] also now contribute funds and many of the latter have contact advisers to liaise with the association.

Both the Schools Council and the Department of Education and Science have initiated surveys and research programmes especially concerning problems of identification, teaching provision and materials. The Schools Council Curriculum Enrichment Projects (SCEPS) under Dr Eric Ogilivie have culminated in seventeen self-enrichment units covering maths and science, the expressive arts, the humanities and environmental studies.

Many L.E.A.'s have initiated their own schemes. In 1973 Somerset was the first to appoint a special adviser for gifted children and Nottinghamshire has an in depth pilot scheme in a small group of schools. Current work in Surrey and Lancaster is described in more detail below.

Much of the money for research on the 'gifted' has been provided by private foundations such as the Leverhulme Trust, the Gulbenkian Foundation and the Leonardo Trust.

2.2.1 The Lancaster Curriculum Development Centre Project

This project is designed to improve problem-solving skills and stimulate the imagination. Productive thinking is considered an essential element for 'gifted' children if they are to cope with a rapidly changing, technological societal structure. Thus, under the leadership of N.C. Buckle, the Curriculum Development officer, a team has produced a series of cards designed to exercise the higher cognitive processes, and to encourage discussion and the recording of observations and research in order to produce valuable solutions or ideas expressed in written form.

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[1] Local Education Authorities.

2.2.2 Provision for the 'Gifted' in Surrey [1]

Provision for the Gifted in Surrey is based on fairly clear cut criteria as unstated policy. It is presumed that the development of suitable provision for the gifted is most likely to occur where researchers display a sensitivity to evidence of giftedness, individual needs, pupil independence and the need for flexibility. Further criteria include the provision of a broad curriculum to allow the emergence of gifts, the availability of adequate resources and the appointment of a teacher who, with other teachers, becomes responsible for initiating and co-ordinating activities.

Considerable efforts are made in Surrey to identify children with special needs. Teachers are asked to submit the names of children who appear to have special needs and considerable general screening is carried out-for reading at eight years and language proficiency at eight and eleven years. Teachers are required to keep records of performance and behaviour together with samples of work in order to ensure detailed monitoring from class to class and school to school. Teachers are requested to be alert to unusual behaviour, interests and special traits as well as to any obvious disparities - superior oral proficiency but poor written expression, for example. Diagnostic tests follow as well as interviews between the head teacher, psychologist, the parents and the child.

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1. Data provided by Mrs A. Joan Dean through personal contact and her participation in the South African Conference on the Education of the Exceptional Child held in Durban, Natal. 24-25 August 1981.

Once identification has been effected, several avenues for enrichment beyond the ordinary curriculum exist. The County Media Resource Centre provides both commercially and specially produced programmes and equipment to individuals or groups in schools. Other opportunities include early admission to 'O' level courses, extra classes in specialist subjects (for example art, astronomy or microprocessors) before or after school , specialist clubs, attendance at Universities or other higher institutions of learning, acceleration to an older group in a specialist subject and special workshops (for gifted writers - including a residential period with a professional writer, - in Maths, modern languages and science, for example). Schools are encouraged to co-operate with each other in order to provide the best possible facilities and many use the two-day closure for in-service training of staff on this topic.

Under the guidance of inspectors with special responsibility for 'gifted' education the Surrey programme has progressed significantly towards its stated aims of:

1) Developing ways of identifying and assessing the needs of 'gifted' children. ,
2) Discovering the most successful ways of catering for 'gifted' children at all stages in education and
3) Providing support for teachers working with the 'gifted'.

2.3 The United States of America

The field of 'gifted' education in the U.S.A. is led by such eminent educationalists as E. Paul Torrance, John Curtis Gowan, Joseph Renzulli and James J. Gallagher. Although much of the work for the 'gifted' must, of necessity, as is the case in the United Kingdom, be the responsibility of local teachers, head teachers or groups of schools, much of the current research and many of the models for identification and programme defensibility have been produced by the men named above and their colleagues. Thus, in the States, teachers have the advantage of both sophisticated in-service facilities and institutes (such as the National/State Leadership Training Institute on the Gifted and the Talented in Los Angeles, California) and the availability of post-graduate courses (M.A., sixth Year Diploma and Ph. D.) in the field of the education of the gifted and talented (such as that offered by the School of Education at the University of Connecticut).

Most of the provision for the 'gifted' in the United States is administered from within the ordinary school system with options such as partial removal from class for specialist subjects or withdrawal to other institutions for part of the day. Thus advanced college placement in a wide variety of subjects to obtain tertiary credits is possible. Certain schools are so highly selective as to be,in practice,'schools for the gifted' - the Bronx High School of Science and Hunter College,for example.

In general though, the philosophy is to avoid any possible hint of elitist treatment or isolation. Thus weekend and holiday camps for the 'gifted' attending state schools are popular. The extent to which 'gifted' programmes differ significantly in both content and method from normal classroom provision varies from school to school and state to state but certainly some states - notably California, Illinois, Georgia and Connecticut - have approached the problem of adequate education for the gifted in a systematic way.

3. THE EDUCATION OF THE 'GIFTED' IN SOUTH AFRICA

The report of the Mission to Overseas Countries (April - June 1979) concerning the instructional and educational needs of highly gifted children in a differentiated education system published by the Transvaal Education Department has established a framework within which the beginnings of education for the 'gifted' in South Africa have been established. Generally recommendations concern children already performing at a noticeably advanced level within the existing structure and suggest facilities as extensions of present provisions rather than either innovative approaches or administrative techniques. These provisions apply only to the white education system and no formal (or informal) inroads have been made in this field in black education to the writer's knowledge.

The above mentioned report recommended early identification and monitoring, a move to more homogeneous grouping and a need for special teacher training which would allow for the fostering of creative ability and for the suitable extension of the powers of logical thought, critical evaluation and problem-solving. To this end, regional centres for extracurricular study were to be set up to cater for children from Standard two upwards in such fields as literature, communication studies, politics,the performing arts and petro-chemical studies. The first of these centres was opened at the Pretoria Teachers Training College in 1981 and caters for additional afternoon courses for Standards two, five and eight pupils given by paid College and University lecturers. Little or no attention appears to have been given to children with superior cognitive ability who underachieve or attain poor scholastic performance.

At present the main emphasis seems to be to provide extra courses in non-school topics for the obviously adept scholastic performer so that he or she may take more subjects at matriculation level in a greater variety of fields than is ordinarily the case.

On 17 January 1980, a post for an Educational Planner (Gifted Children) was advertised in the Cape. The incumbent (the subsequently appointed Dr J.S. Neethling) was required to conduct an in-depth study of the various aspects of giftedness in children for the purpose of devising programmes for Gifted children in the primary and secondary standards, and of giving appropriate guidance to teachers and parents .

Dr Neethling has now published a brochure (G9) outlining his intended planning structures towards the fulfillment of the above requirements.

Although still in the experimental stage by June 1981, with schools of the Cape Peninsula and Port Elizabeth selected to participate on a voluntary basis, Dr Neethling's proposals should have considerable impact on the education of the 'gifted' in the Cape if they are implemented. He proposes to involve children, parents, principals, psychologists and specialist co-ordinating committees in a series of enrichment programmes both in and out of school which seek to provide not only academic but also psychological and social enrichment. He provides some practical ideas for programme content both within and beyond the present syllabus suggesting the predominance of abstract concepts, transfer of knowledge, well-motivated judgments, the use of laboratories and outside expert advice and self-initiated projects. He is concerned that the 'gifted' child should develop a realistic and healthy self-image and that adequate teacher-training and constant research in the field be fostered.

3.1 The Education of the 'Gifted' in Natal

Prior to 1977, the Natal Education Department left the matter of the education of the 'gifted' largely to individual principals and teachers. However in 1977 and 1978 a study of the relevant literature by the academic planning section resulted in the appointment of an *ad hoc* committee representing sections of the department, principals and the teachers' societies. The committee was to establish current provisions for children who 'excel markedly [1)] in the ability to reason, judge, invent or create' in Natal Schools and then to make recommendations for changes or innovations.

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1. That is primarily those who *show* their excellence either in their all-round ability or in specific directions.

Some schools were found to be open to suggestions and assistance in the field of education for the 'gifted' provided that provisions did not so increase teachers' workloads as to adversely affect other children. In junior primary schools there was some evidence of individualised learning in the form of projects, group reading, individual mathematics cards, and the use of games and tapes to keep children 'occupied' after they had finished their work. There was also one incidence of acceleration. Some principals stated that nothing could be cone owing to overlarge classes and a lack of teacher-time.

Primary schools made similar provisions for special projects and groupings. They also referred children to the Natal Association for Gifted Children [1] and one school operated an 'integrated day'. Yet only *one* programme approached *truly different* provision for the 'gifted' - a small group of children working with their principal on electromagnetic waves, frequencies and micro-waves. Teachers and principals made note of the need for seminars and discussion groups on the subject as well as for the need to place greater emphasis on the education of the 'gifted' during teacher training.

The Chairman of the *ad hoc* committee, Mr C.J. Talbot, the Principal Education Planner for Natal, undertook a study visit to the United Kingdom and upon his return made the following recommendations:

> It is recommended that the *ad hoc* committee should consider the implications of recommending that the department should embark upon a deliberate, outgoing policy of encouragement to principals and teachers to respond to the challenge of providing for the educational needs of the gifted children in their schools. It is further recommended that

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[1] A voluntary group of professionals providing enrichment activities and advice and run on much the same lines as the National Association for Gifted Children in England and the Schemerenbeck Centre in Johannesburg .

> in discussing the ways in which such a policy could be implemented the committee might consider, amongst other things, the possibility of recommending the following:
>
> 1. The appointment of an advisory teacher for gifted children and the role that such a person could play in Natal, to visit schools, to encourage enthusiasm, co-operation and support from principals and teachers, to guide and assist teachers where possible and to promote the establishment of voluntary working parties with aims and objectives similar to those adopted by the working parties in Essex;
>
> 2. that the department should provide official encouragement to such working parties and the necessary finance;
>
> 3. that the department should undertake to disseminate information relating to gifted children;
>
> 4. that in-service courses or seminars on the subject should be held; and
>
> 5. that more emphasis should be given to the education of gifted children in teacher training courses at provincial colleges of education (Talbot 1980, p. 44).

Despite the provisions noted in some schools, the final report of the *ad hoc* committee reported that;

> Most of the programmes appear to be aimed at bright children rather than at truly gifted children. It is unfortunately also true that in many schools principals and teachers display very little interest in the needs of gifted pupils.

These statements substantiate the data noted by the researcher in Section Eight. Their significance warrants repetition here i.e. although most of the teachers of children in the high I.Q. groups were aware of their superior potential, 74% stated the children not to be achieving at their peak at school, 42% rated them as scholastically 'average' or 'below average', 79% failed to exempt children in areas of the syllabus in which they were already proficient and 81% provided no special facilities at all.

The *ad hoc* committee reiterated the statutory requirement of the National Education Policy Act of 1967 (No. 39, 1967) which makes provision for education "in accordance with the ability and aptitude[1] of and interest shown by the pupil". This requirement clearly includes such extraordinary abilities as those possessed by gifted children. Thus the committee saw fit that provision should be made "as far as possible within the normal school situation". Such provision should include early school entrance and acceleration in a few carefully considered cases, partial withdrawal from class and *especially enrichment.*

The committee drew up a comprehensive check list for teachers which would enable them provisionally to identify both the achieving and underachieving or unmotivated gifted child. The independent observation of two teachers to be filed and kept would initially be the main means of identification to be confirmed later by means of psychometric tests. Avoidance of the term 'gifted' would obviate difficulties associated with entrance to enrichment programmes. These programmes would be developed by subject committees, staff at colleges of Education and seconded teachers or by voluntary working parties.

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1. This definition would seem to the writer to demand the inclusion of the under-achieving gifted child.

Considerable attention would need to be directed to both teacher training and teacher re-training if provision for the needs of 'gifted' children was to become policy in Natal Schools.

In order to embark on a "policy of encouragement" to teachers and principals rather than one of prescription, the committee suggested the appointment of an advisory teacher for gifted children whose task it would be "to visit schools, to disseminate information about gifted children, to guide and assist teachers where possible, to promote the establishment of voluntary working parties, to write enrichment programmes and to liaise with the committee on gifted children". It was also suggested that a permanent committee on giftedness should be appointed to advise the Director on matters related to gifted children and their education, to liaise with the appointed advisory teacher, the inspectorate, school principals and working parties thus monitoring the effectiveness of the approach and continuing to study the topic in order to make further recommendations.

Dr. G.W. Harrison, Rector of the Natal Training College, has recently been seconded to fulfil the above-mentioned function of part-time adviser for talented and exceptional children in Natal. If he is able to accomplish the tasks elaborated by the *ad hoc* committee children positively identified as being in need of special facilities will certainly benefit from the extra provision and monitoring they will receive.

4. AN OVERVIEW OF TEACHER, PUPIL AND PARENTAL ATTITUDES TO SOME ASPECTS OF EDUCATION IN NATAL

4.1 An Overview of the Attitudes of the Teachers of Children in the High I.Q. Study Groups Towards Teaching and the Teaching of English in some Natal Primary Schools

The Natal Syllabus for the teaching of English First Language in Primary Schools and the accompanying Guidelines provide a detailed yet flexible framework within which teachers may function according to the broadly defined aims of the 'Language for Life' and 'Language across the Curriculum' policies as outlined in the Bullock Report. It is advocated that language activities should be wide ranging, child-centred and related to first-hand experience rather than confined to series of unrelated exercises. Language is to be seen as a means to the active sharing by teacher and pupil of the learning process. The basic skills are seen as a means to clearly specified ends. Thus the accomplishment of the mechanical skill of reading is for understanding, acquiring information and recreation, correct oral presentation is to facilitate communication and social courtesies and writing is designed to express thoughts and impressions, describe events and foster original thinking as well as to improve the quality of language and expression. Relevant content and context are thus seen as the basis of all language activities.

Formal grammatical knowledge is to be taught as the need arises, comprehension is to be undertaken with a view to understanding and interpretation rather than the reproduction of facts, and writing is to be practised with a real purpose and audience in mind and thus also couched in a language appropriate to the topic.

Exposure to a wide variety of sensory and emotive experiences including poetry and literature is advocated with a view to the effective generation of a need to communicate through language. Thus individual response is encouraged as is exemption in sections of the syllabus already mastered. It is recommended that the teacher begin with the child's present ability and proceed from there. Some examples and ideas for the implementation of these principles are provided.

It is clear that many of those who taught the children in the high I.Q. groups failed to follow the advice stated above. Seventy-nine percent failed to exempt children in their areas of proficiency, less than half used poetry and prose as stimuli for language expression and some teachers had obviously never read either the Syllabus or the Guidelines for they failed to understand such questions as 'To whom is writing directed' and 'Describe which type of comprehension questions you prefer'. Approximately half of the teachers who responded to the questionnaire used formal exercises to teach grammar. Study skills were minimally taught and tended to include only note-taking, summarising and the use of dictionaries and enclyclopaedias.

Some teachers, however, stand out as fulfilling both the content and attitude to language teaching (and to teaching in general) incorporated in the Syllabus and Guidelines. One teacher taught several advanced research skills including indexing, the correlation of facts, the use of different sources and the notion of plagiarism. Such skills are essential for independent study especially for children of superior cognitive ability. Other teachers used music, paintings, dramatisation, story cards and tape recordings to stimulate linguistic expression. Some teachers were thus effective, stimulating and aware of the needs of primary school children in the language arts area. Others obviously fell far short of adequate, let alone effective, language teaching. It is clearly difficult to estimate the effectiveness of language teaching from responses to a questionnaire and thus in order to obtain a clearer picture of teaching techniques and their effectiveness, the children in group A were asked to state their views on education in general.

4.2 'Out of the mouths of babes' - Some Views on Education by Children in Group A

The children's opinions reflected the obviously wide ranging quality of both teaching and school facilities noted above. Some children complained of boredom, the lack of challenge, the repetition of menial tasks or of needless memorisation or repetition (especially of reading material and test answers). Some schools had very little suitably challenging reading material whilst others had impressive reading rooms. Alison noted the radical difference in teaching techniques and attitudes from one teacher to another. Her present teacher covers a great deal of ground using themes to integrate subjects and illustrates these with real life examples even to the extent of arranging to have a horse brought to school.

Yet, in general, the children found the work inappropriate to their needs both in content and pace. They were clearly aware of ineffective and inappropriate handling yet were equally aware of the necessity of *some* rather long-winded techniques - the value of setting out long division in order to be able to check answers, for example. They were equally aware of, and sympathetic to, the teacher's need to cater for other children in the class and some stated that they had perfected a system of daydreaming in order to lessen boredom. Homework was a topic hotly debated as both necessary to foster independent study and yet cumbersome, tiring and often unrelated to schoolwork.

Suggestions for the improvement of teaching strategies included smaller groups with specialist teachers, a greater variety of text books, the avoidance of unnecessary 'writing-out of notes' and increased opportunities for self-initiated and researched projects.

4.3 Some Comments on Education in Natal from Group A and B Parents

Parents were asked to comment on the education system in general and on language teaching in particular.

As might have been expected, they found it easier to make comments concerning administrative matters and general procedure than to elucidate problem areas in the more specialised field of language.

Only twenty percent of the parents saw the need for the establishment of special schools for their children. Most would prefer extended provision such as special classes, mixed age groupings and enrichment programmes within the present structure. Most parents were satisfied with the education their children were receiving for only three parents expressed general dissatisfaction and six were unsure of their feelings. Yet many were able to pinpoint specific areas of concern.

Most often stated was the need for a more individualised approach to pupils who suffered from an excess of rote learning, repetition and regimentation in order to fulfill the requirements of tests and examinations. Parents saw a need for more realistic challenge, smaller classes and greater freedom of expression.

Steven and Rose's mother made a plea for teachers to become specialists at primary school level and to keep abreast of new developments, thus providing content both more interesting and more closely related to reality. Anna's parents considered that present content lacked both breadth and scope for creativity as attention was largely directed to fine details. Other general complaints concerned the excessive amount of homework given and teachers' failure to mark work.

Comments on language teaching referred mainly to boring and repetitious reading material and to a lack of well structured spelling and reading programmes.

The parents of children in group A were asked to comment on the benefits arising from their membership of the Natal Association for Gifted Children both for themselves and their children. They considered that their children enjoyed the holiday enrichment programmes but that courses needed to be more frequent, more extensive and intensive. They themselves seemed to have derived considerable benefit from the Association, notably a better understanding of their children as a result of contact with other parents and with specialists on the committee.

5. OVERVIEW

Clearly, organisations such as the Natal Association for Gifted Children have their role to play in the overall network of provisions for the 'gifted'. Adequate provision, however, goes far beyond 'extra' facilities either within the school or without. This final section of the dissertation thus attempts to proceed beyond the details of provision whilst still incorporating as many practical and detailed considerations of use to teachers and others as possible. Some of the considerations will include the place of 'giftedness in language' within a complex, multi-dimensional definition of giftedness, language policy, practice and recommendations for improvement and general comments on organisation, teaching techniques and teacher-training. Wherever possible these data will be summarised and presented in the form of models or diagrams.

5.1 The Place of 'Giftedness in Language' within a Complex, Multi-Dimensional Definition of Giftedness

Figure 27 represents an overview of the major issues of the study and attempts to highlight the place of the relationships between 'giftedness' and language proficiency. Thus the individual child of superior general intelligence or possessing a fortunate composite of abilities exists within influences, and is influenced by, factors operating at home and at school. Concentrated study of the child and a comparison with other children leads to either formal or informal evaluation (or both). Identification by single or multiple criteria would then result in the child's

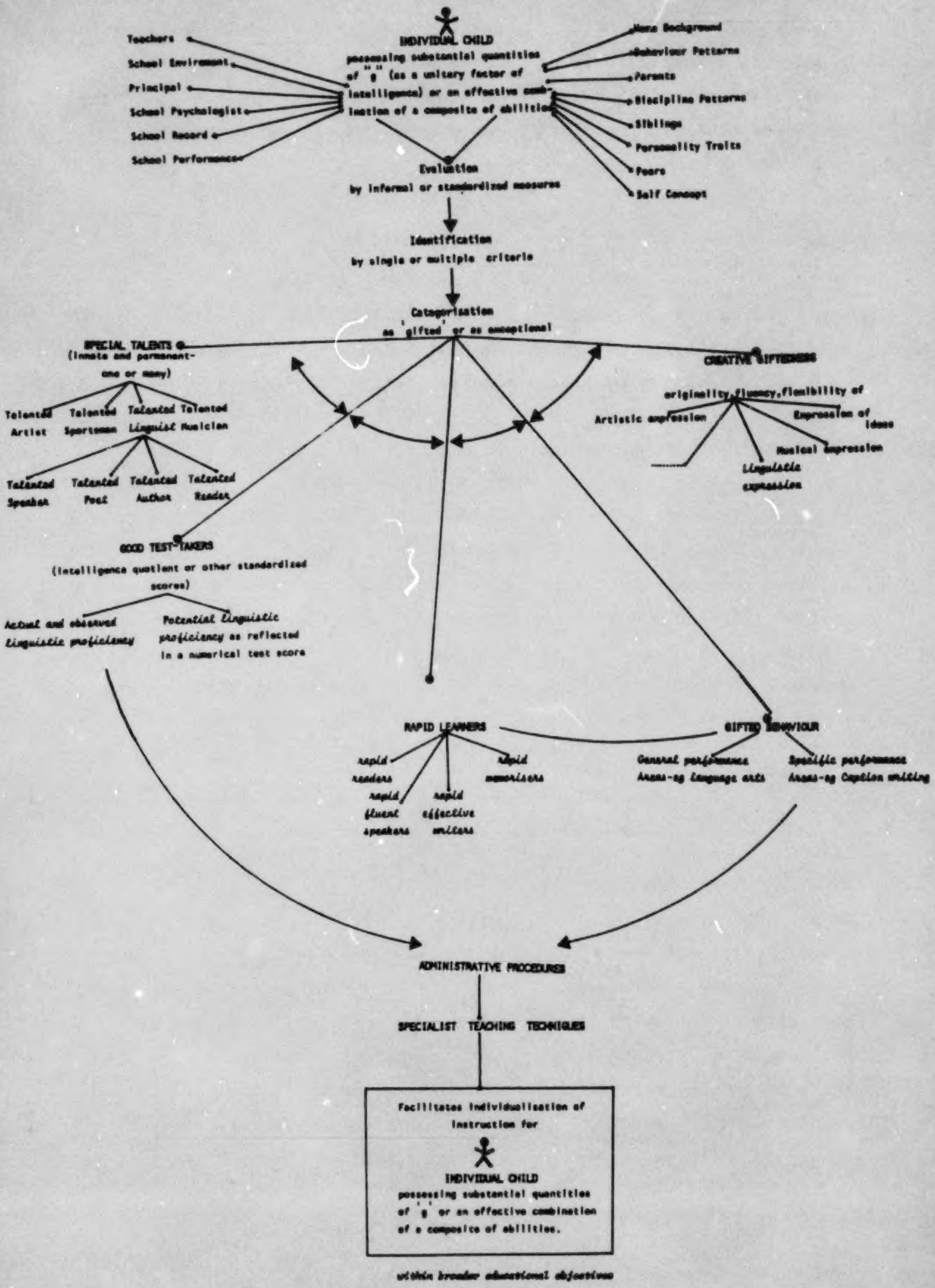
INDIVIDUAL CHILD
possessing substantial quantities of "g" (as a unitary factor of intelligence) or an effective combination of a composite of abilities
Teachers
School Environment
Principal
School Psychologist
School Record
School Performance
Home Background
Behaviour Patterns
Parents
Discipline Patterns
Siblings
Personality Traits
Peers
Self Concept
Evaluation
by informal or standardized measures
Identification
by single or multiple criteria
Categorisation
as 'gifted' or as exceptional
SPECIAL TALENTS
(innate and permanent- one or many)
Talented Artist
Talented Sportsman
Talented Linguist
Talented Musician
Talented Speaker
Talented Poet
Talented Author
Talented Reader
CREATIVE GIFTEDNESS
originality, fluency, flexibility of
Artistic expression
Expression of ideas
Musical expression
Linguistic expression
....
GOOD TEST-TAKERS
(intelligence quotient or other standardized scores)
Actual and observed Linguistic proficiency
Potential Linguistic proficiency as reflected in a numerical test score
RAPID LEARNERS
rapid readers
rapid fluent speakers
rapid effective writers
rapid memorisers
GIFTED BEHAVIOUR
General performance Areas-eg Language arts
Specific performance Areas-eg Caption writing
ADMINISTRATIVE PROCEDURES
SPECIALIST TEACHING TECHNIQUES
Facilitates individualisation of instruction for
INDIVIDUAL CHILD
possessing substantial quantities of 'g' or an effective combination of a composite of abilities.
within broader educational objectives

Figure 27: The place of 'giftedness in language' within a complex multi-dimensional definition of giftedness

categorisation as possessing skills or abilities which would warrant special designation and thus special administrative and teaching techniques. These teaching techniques must ultimately cater for the child as an individual possessing abilities markedly different from those possessed by his or her peers.

Categorisation as 'gifted' or 'exceptional' presupposes giftedness *in* or *at* something. Thus within the broader categories of creativity, talent, superior performance, accelerated pace or behaviour, a specific proficiency in the language field may occur. None of these categories is mutually exclusive or isolated, thus a child may be capable of original linguistic expression couched in rapid, fluent speech and in poetry displaying considerable talent. Considerable further research is necessary to elucidate the nature of the abilities possessed by children in various categories and of the relationship between these.

5.2 Variations in Language Proficiency amongst 'Good Test - Takers'

As few individuals could be said to belong solely and exclusively to one category, considerable variation should be expected and accepted but there are surely some general patterns to be expected within each category. This study has been chiefly concerned with a consideration of the possible linguistic patterns displayed by a group of 'good test-takers'. Each child in the group has developed within a complex network of contributory factors,including innate talent or creativity, home background, personality, powers of concentration and efficacy of teaching,towards expression of oral, written and reading ability somewhere between the extremes of lingusitic efficacy and inefficacy.

Linguistic proficiency as displayed by the children during the programme can be stated to be an observed proficiency as opposed to a potential proficiency expected in relation to a certain verbal or total score obtained on an intelligence test. Thus in terms of oral expression the children could be grouped as follows 1):

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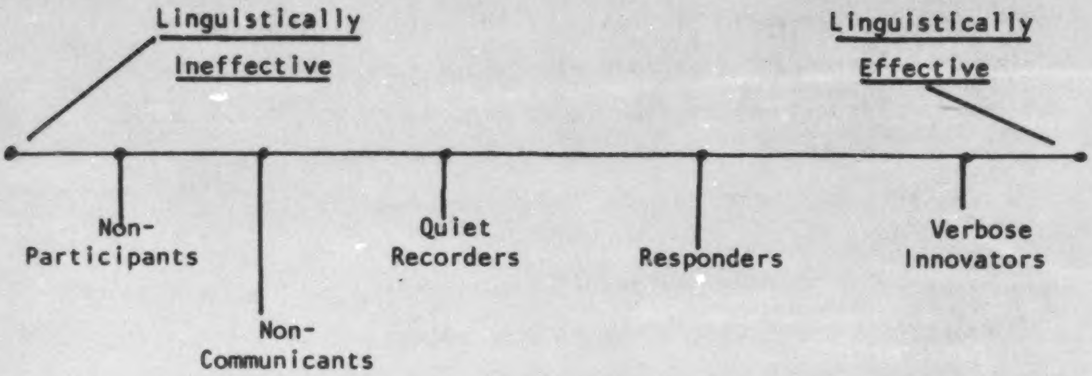
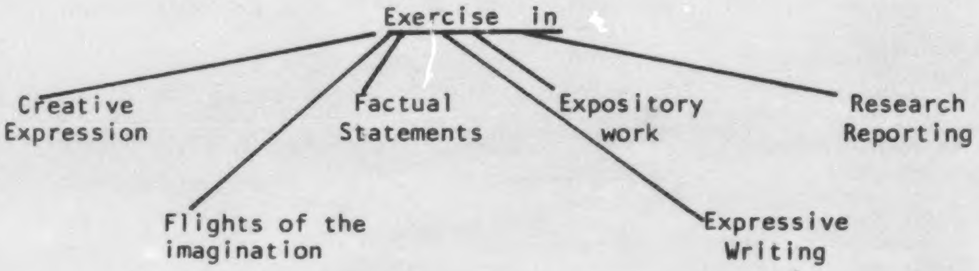
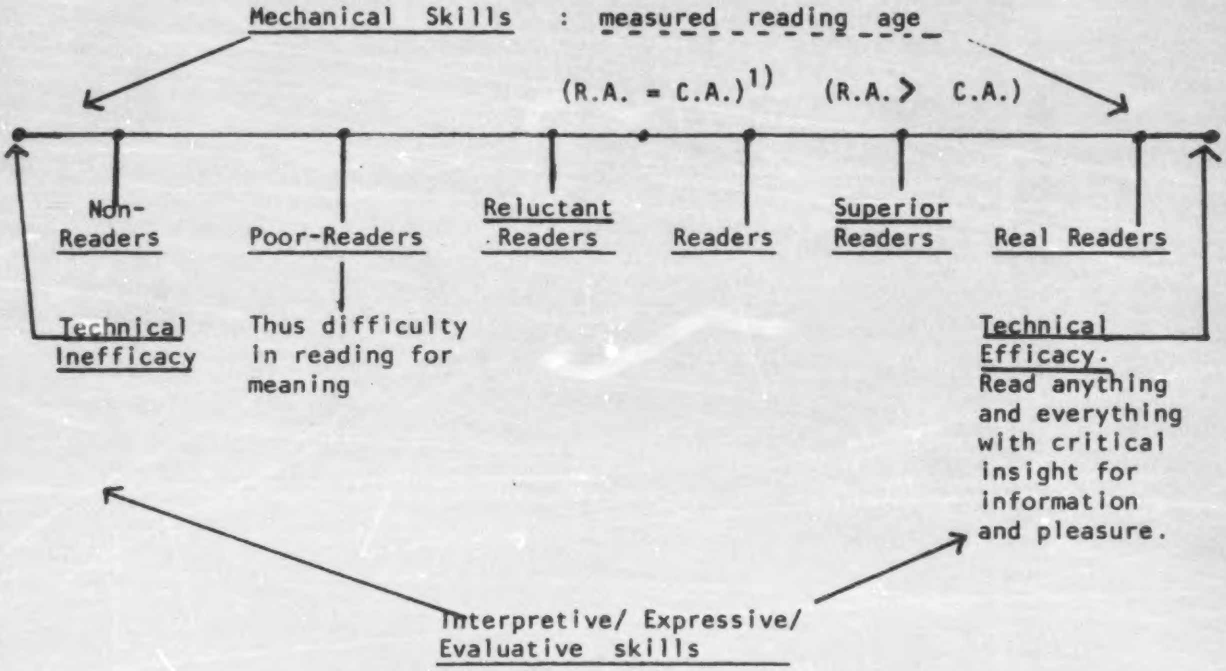
1. These designations and placements on a continuum represent intuitive expressions of the researcher's findings.


Linguistically
Ineffective
Linguistically
Effective
Non-
Participants
Non-
Communicants
Quiet
Recorders
Responders
Verbose
Innovators

Similarly, as regards written expression, individual children and also groups of children could be placed within the extremes of effective and ineffective written expression. At one extreme, expression would be a graphically acceptable, grammatically correct, fluent and creative expression of abundant ideas exhibiting an extensive vocabulary, correctly spelt. At the other extreme, shallow, commonplace ideas would be poorly expressed in incorrectly spelt, illegible script. The study of written expression amongst the study groups has been particularly interesting, for individual children may move along the continuum in some respects (originality, fluency, depth of ideas for example) in relation to the degree of reaction to a given stimulus, whilst remaining static in others such as grammatical correctness, legibility and spelling accuracy. In order to evoke written products of significant quality both in content and technical correctness children of superior potential intelligence seem to require exposure to as wide a variety of writing skills and types as possible i.e.


Exercise in
Creative
Expression
Factual
Statements
Expository
work
Research
Reporting
Flights of the
imagination
Expressive
Writing

Reading skills feature a combination of levels of technical mastery, variety, level and expanse of book choice as well as interpretive and expressive abilities. The children in the study groups once again exhibit reading power and skill which situates them in widely differing positions on a 'reading' continuum which would incorporate both technical and expressive/interpretive/evaluative skills i.e.


Mechanical Skills : measured reading age
(R.A. = C.A.)1)
(R.A. > C.A.)
Non-Readers
Poor-Readers
Reluctant Readers
Readers
Superior Readers
Real Readers
Technical Inefficacy
Thus difficulty in reading for meaning
Technical Efficacy.
Read anything and everything with critical insight for information and pleasure.
Interpretive/ Expressive/ Evaluative skills

Placing children on such continua of oral, written and reading proficiency scales allows thus the development of a composite picture of general linguistic proficiency for each child and enables teachers to pinpoint areas of specific strength and weakness in each skill. *Individual* provision in the language field is thus facilitated. For example Frank is unlikely to become a 'real reader' until deficiencies in word recognition, visual memory and eye movements are remedied.

It is also clear that without in-depth and specialist investigation of

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1. R.A. = Reading Age.
   C.A. = Chronological Age.

actual linguistic proficiency as opposed to potential intellectual or linguistic proficiency (as measured on an I.Q. or other standard score) such children as Frank remain unaided - presumed to be 'bright but lazy or unmotivated'. It is as a result of such experiences during the researcher's programme and with a view to helping teachers identify and encourage improvement in children like Frank that the following recommendations are proposed. They include comments on teaching techniques in general, organisation and teacher-training as well as more specific comment on language teaching.

6. RECOMMENDATIONS

6.1 Introduction

The results of this investigation would seem to indicate the following state of affairs:

It was the teacher who conveyed to the child a notion of his or her relative academic potential and merit. Teachers of most of the children in the high I.Q. groups were aware of their charges' superior academic potential. The teachers expectations for these children were therefore high. Yet most were disappointed at the children's academic performance for very few of the latter were stated to be achieving at their peak academically.

Teachers were aware of many of the qualities inherent in those children but failed to evoke the desired performance. They provided little in the way of special facilities for these children using the same methods, materials, techniques and degree of flexibility as for other children. As a result the children appeared to be receiving a complex and confusing message regarding their concept-of-self in the school. On the one hand, the child has, as a result of his superior intelligence, a fairly accurate notion of his academic abilities and potential in relation to others - this view being established through complex inter=action of the self with peers, parents and teachers. On the other hand,the teachers conveys a dual message, i.e. 'I know you are bright/capable/different but I will only provide for you what is provided for the other children'. Thus, as the teachers regretfully admit, the child fails to display the very characteristics which the teacher *knows* him capable of. The provision of stereotyped teaching aimed at the child of average ability thus fails to provide adequate challenge and a balanced experience of failure and success. The child possessing superior academic potential may react (and this study seems to indicate *does* react) to this situation in one of two ways - *conformity* or *rebellion* (opting out). These situations and their results may be diagrammatically represented as follows:

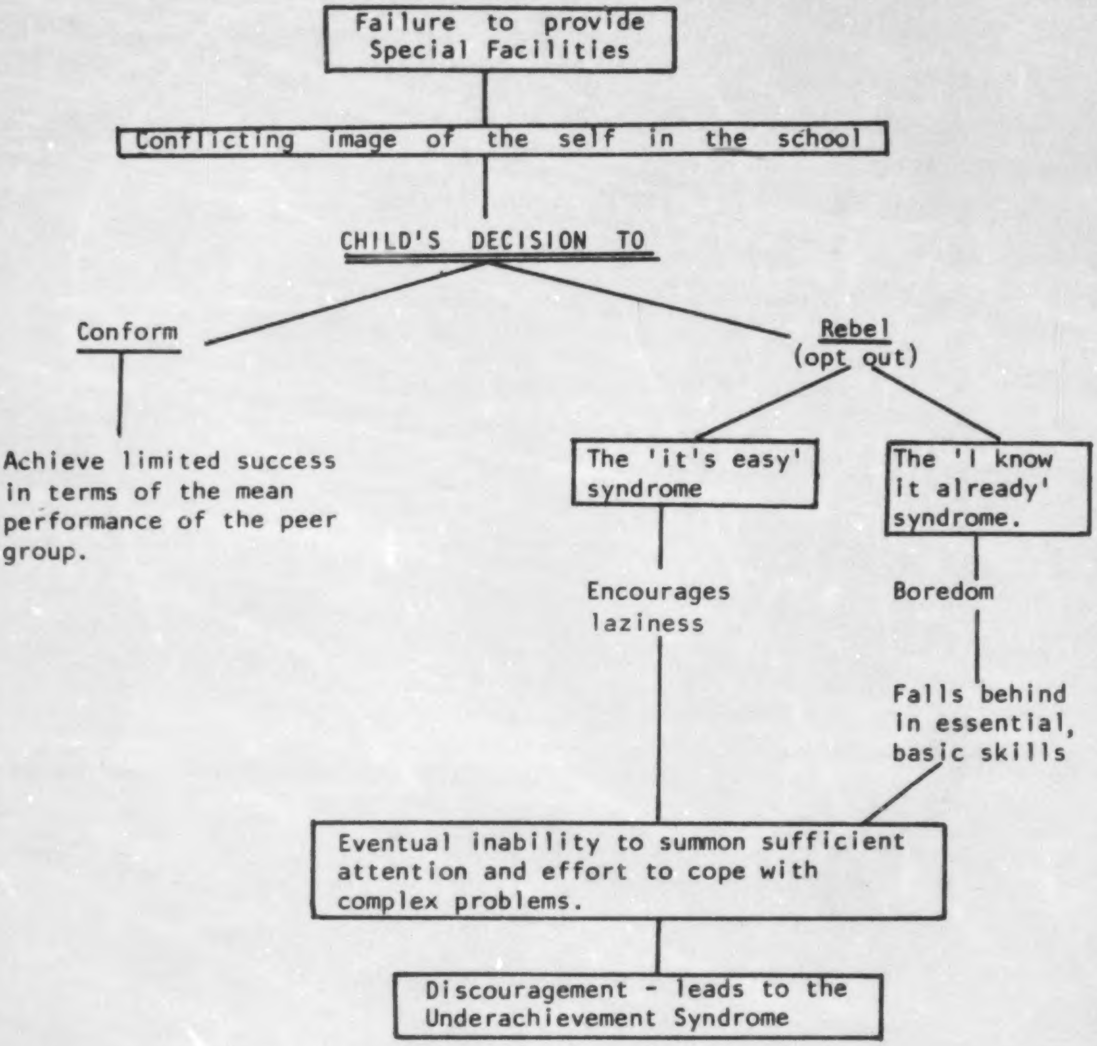
Failure to provide Special Facilities
Conflicting image of the self in the school
CHILD'S DECISION TO
Conform
Rebel (opt out)
Achieve limited success in terms of the mean performance of the peer group.
The 'it's easy' syndrome
The 'I know it already' syndrome.
Encourages laziness
Boredom
Falls behind in essential, basic skills
Eventual inability to summon sufficient attention and effort to cope with complex problems.
Discouragement - leads to the Underachievement Syndrome

Figure 28 : Reaction to teachers' failure to provide special facilities.

The writer hopes that some of the following recommendations will help both teachers and children avoid the pitfalls described above and thus *close the gap* (clearly perceived by both teachers and children) *between potential and actual scholastic and linguistic performance.*

6.2 General Recommendations Concerning Teaching Techniques and Methodology

The following recommendations result from the researcher's discovery of *widely differing* levels of linguistic proficiency and scholastic performance amongst a group of children with similar measured intellectual potential. All recommendations are thus designed to facilitate the planning, organisation and execution of increasing *individualisation* of educational content, from the stated objectives for such children i.e. they proceed from the premise of a need for teachers to encourage the individual to fulfilment of his or her unique potential, talent or interest. These recommendations will be considered under the following headings: the need for flexibility, the creation of opportunities, reviewing and monitoring and continuous observation and research.

Prior to a detailed consideration of the above, it is necessary to state certain broader presuppositions which serve as a backdrop against which to highlight finer points.

Firstly, it is presumed that such recommendations would be carried out within the framework of a sound, broad, basic and adequate education programme (1). Secondly, the majority of the recommendations are

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1. In South Africa this would include most of the White, Asian and Coloured communities. The majority of the other Black communities in this country would face severe difficulties due to large numbers and inadequate facilities.

considered suitable for implementation by individual teachers or as policy for a school or department for they contradict neither recognised educational principles nor stated policy in Natal or South Africa as a whole. It is further presupposed that children may be grouped into broad categories, one of which may be termed 'gifted', that within this group various types of 'giftedness' may be identified in children but that, in the final analysis, one must consider each child as a *unique individual*[1] performing at certain points within broad scholastic and linguistic spectra. The recommendations thus attempt to assist the teacher to *individualise* both content and teaching technique. This presupposes a sincere interest and involvement of the teacher in the pupils' lives and a recognition that the 'gifted' child needs *more 'teaching'* not less than other children, more in quality, quantity and enthusiasm. It is finally supposed that the ultimate end of education is an ability to cope with multiple, complex situations in a fast changing environment rather than the ability to complete tedious tasks of little value for the sake of learning perseverance.

6.2.1 The Need for Flexibility

(Or being prepared to expect the unexpected and accommodate it). The need for flexibility encompasses the attitudes and behaviour of both teacher and pupil.

- *The teacher must be flexible enough to change his identity according to the needs of the situation.*

Thus he or she may act as guide, sympathetic director, consultant, diagnostician, honest critic, co-author, fellow discoverer, mentor, pupil and co-evaluator.

- *Likewise the teacher must allow flexibility in the child's attitudes and behaviour.*

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[1] All of them as unique, if not so obviously and distressingly so, as Sheila in *One Child* (Hayden 1980).

The child is thus permitted, at various times, to forgo creativity for presentability or vice versa, be a loner, leader, active or passive learner, subdued or raucous, indulge in fantasy or exert logic in both convergent and divergent thinking.

Neither of the above states is possible without a radical change in attitude away from stereotyped and traditional content and methodology. Hence teachers will further need to:

- *Compact the basic syllabus in parts and extend it in others.*

- *Be flexible enough to modify plans, the timetable, entire lessons, the methodology, grouping strategies, content and procedure in order to capitalise on a particular and optimum learning situation and on the natural adventurousness and curiosity of the 'gifted'.*

- *Make provision for new beginnings - a new school, stream, teacher or approach.*

Such flexibility will thus lead to the identification of the strengths and weaknesses of individual children rather than the identification of 'gifted' children as such.

6.2.2 The Creation of Opportunities

(By broadening the framework of what is pemissible thus allowing the child to display positive tendencies resulting from his abilities).

Opportunities are required for:

- *Freedom within a broad disciplined framework,*

  to

- *Learn skills, attitudes and techniques from the teacher (and other members of the community brought in to share their expertise) as a good model;*

to

- *Practise social skills such as sensitivity, tolerance, courtesy towards and interest in others, with a view to respecting and understanding different points of view representative of other times, other people and other situations;*

to

- *Display and discuss work and production with a real, relevant and interested audience.*

In order to pursue the above, the child needs to practise *responsibility* and must be provided with *opportunities* to do so.

Thus the teacher is to provide the child with opportunities for *joint* responsibility for:

- *Setting realistic short and long-term goals.*
- *Discrimination and evaluation of self, others, academic achievement and its products.*
- *Choice of topics and pusuit of interests for independent study.*
- *The choice of method and mode of expression in the pursuit, recording and discussion of original research.*
- *Budgeting and organising the pace and time required to carry tasks to successful conclusion, to inspire interest and motivation for oneself and others.*

Such basic opportunities and responsibilities can only function in terms of sound yet innovative content and techniques including:

- *The ability to ask as well as answer questions.*

- A move away from drill and the repetition of facts to avoid over-reliance on memorization.

- Yet the maintenance of respect for factual data for its own interest and in order to manipulate it and proceed beyond its bounds to intrapolate.

- Thus a sound grounding in the basic skills of mathematics, science and language is required.

- Opportunities to discuss and consider major issues, to absorb ideas and concepts in order to allow the functioning of the processes of evaluation
  deduction
  comparison
  interpretation
  analysis
  synthesis
  evaluation
  association
  interrelation
  classification
  transfer
  application
  organisation

  in response to different, new, original, challenging and stimulating material.

- Opportunities to learn study skills together with open access to all relevant data, equipment, materials, sources and resources.

6.2.3 Reviewing and Monitoring

(For remedial action, counselling and encouragement). Reviewing and monitoring must proceed beyond the usual round of marks and evaluative comments to include close scrutiny of:

- *Basic skill acquisition.*
- *General performance.*
- *Behaviour.*
- *Samples of work across subjects and at different times.*
- *Interests.*
- *Special traits.*
- *Obvious disparities.*

6.2.4 Continous Observation and Research

(Of the child, special provision and their interaction for the increase of knowledge and the improvement of facilities).

- *The observation of 'gifted' children both formally and informally, both in special programmes and in ordinary classrooms, facilitates suggestions for the improvement of curricula, techniques and advice on vocational guidance for individuals.*
- *It serves to establish a detection and referral system for the general information of professional educators, class teachers, lecturers, parents and the community in general in order to evoke sympathetic understanding.*
- *It allows for consideration of the child's ability level so that teachers can proceed from there.*

6.2.5 The Underachievement Syndrome

All the above recommendations are designed to promote effective thinking and communication, adequate challenge, motivation and satisfying scholastic achievement. Some children, as a result of scholastic or linguistic imbalances or disabilities, or non-intellectual factors such as fear of failure, poor parental handling, inadequate teaching or lack of interest, fail to achieve and thus *require special attention beyond that given above.*

Underachievement causes personal suffering to the child and others and, if not remedied *early*, results in a negative attitude to school and failure in the basic skills which may be enduring.

An individualised combination of administrative, advisory, professional and didactical strategies are thus recommended:

- Special grouping or acceleration and especially *inspired teaching.*
- Recognition, affection and praise.
- The inspiration of confidence.
- Motivation in areas of success and interest.
- Realistic acknowledgement of weaknesses.
- Acceptance of reasonable steps to remedy these.

6.3 Recommendations Concerning Principles of Language Teaching

6.3.1 Introduction

Linguistic modes interact and are interdependent. Thus, whilst the primacy and centrality of informal talk cannot be denied, neither can its intimate link with reading and writing. Reading and writing may be chronologically later developments than talking, yet talking and writing may, in fact, grow from reading. Language is further intricately bound to thought and to first-hand experience. Such complexities make the understanding of the nature of language, its tuition and, when necessary, its remediation, a highly specialised and demanding task. When one further considers the intricate links between language and home background and between linguistic proficiency and scholastic achievement, one is aware of the depth and breadth of knowledge required in this field by those teaching all ages and subjects. Not only is there an increasingly complex body of literature and research on language and language usage in the classroom but an increasing necessity to individualise basic language programmes, remediate where necessary, exempt where necessary and encourage the use of a variety of modes. The language arts need to maintain their status and primacy in a competitive technologically and mathematically orientated era, whilst teachers attempt to improve scholastic success through the improvement of linguistic skills, thus closing the gap between individuals' actual and potential linguistic output.

6.3.2 The 'Gifted' Child and Language

The children possessing superior intellectual potential in the groups studied understood the researcher's instructions with ease. They seldom asked for clarification of either individual words or instructions. They tended to use standard English conveying no obvious attempts to raise the abstractual or contextual level of their language. Language was used as a tool rather than as an objectified and conscious end in itself - a means to express thoughts, ideas, imaginings, intellectual processes, personal anecdotes and knowledge already acquired.

Beyond these general statements, it seems that a great variety of linguistic responses is a notable feature of children grouped according to superior measured intellectual potential. Their linguistic output varied greatly in quality, quantity, depth, originality, inclusiveness, fluency, legibility, length, grammatical correctness, lexical appropriateness and level of understanding and meaning. Proficiency in language may reveal itself in subjects taught *outside* the formal language period as a result of an intense interest - in history for example. Some children may display clearly identifiable traits such as a marked interest in and sensitivity to literature, oral persuasiveness or an ability to read a wide range of texts with understanding. Others may read so little as to be termed 'non-readers', have difficulty in writing and spelling and thus be in need of specialist remediation.

Linguistic precocity in the oral mode may be indicative of superior linguistic ability or it may merely represent the outcome of considerable linguistic stimulation in the home. It is also possible, however, that mediocrity in written expression may disguise both a superior intellect and/or other superior abilities.

The complexity of the task of dealing with the *level* of proficiency in *each linguistic mode* of expression for *each* child possessing superior intellectual potential is thus clear. The complex picture presented by these data would seem to lend weight to Vygotsky's theory that the fusion of speech and thought is limited to a circumscribed area and thus some children are verbally much more proficient than others who have predominantly non-verbal skills.

In the light of the above findings the writer would like to suggest three broad approaches as basic to language teaching for children with superior intellectual potential. These are that:

1) *novel and unusual stimuli or new discoveries by the child are most likely to ignite a desire to communicate by talking, writing or drawing;*

2) *in order for the multiple and complex linguistic strengths and weaknesses of such children to become apparent a broad range and balance of both language activities and linguistic expertise must be available in the primary school;*

3) *free, but directed, access is made available to the library, laboratories, practical rooms and audio-visual and other equipment.*

More specific recomendations include an *early introduction to:*

- *The science of linguistics (including a study of phonetics and its notation) in order to introduce children to broad language issues and to facilitate recognition of and experimentation with structural patterns and sounds.*
- *The notion of register i.e. speaking and writing according to the dictates of the audience and purpose.*
- *A foreign language.*
- *Listening skills - in order to facilitate topical and serious discussion and debate, the isolation of central issues and the evaluation of linguistic skills.*
- *The place and necessity of both fantasy and logic, fiction and non-fiction within the language field.*

In addition special consideration needs to be given to the following:

- *The possibility that children with superior intellectual potential may hide fairly serious gaps in their linguistic ability by means of judicious guessing of meaning from context.*
- *The possibility that standardized scores fail to reflect the actual quality of a child's linguistic output.*

- *The possibility that children possessing language disabilities or imbalances in non-verbal scores may need special consideration and tuition in order to achieve a balance between minimum standards, basic skills, an inability to communicate and structural disabilities on the one hand, and the need for creativity and fluency of expression on the other.*

- *The possibility that alternative modes of expression, beyond those traditionally used, should be allowed and accepted - that for example drawing and labeling or tape recording are valuable and valid modes in themselves.*

- *The possibility that children who are predominantly 'consumers' may, according to the demands of their age, situation and personality, either be encouraged to be more productive or, at least, to obtain maximum benefit as 'consumers'.*

- *The possibility that sometimes monotonous content and teaching techniques aggravate language disabilities or imbalances by causing children to 'switch off' or 'daydream' thus ignoring the very assistance of which they are most in need.*

6.3.3 Talking

The level of informal noise and chatter during the sessions with the high I.Q. groups was extremely high, yet was interspersed with seemingly spontaneous periods of silence and concentration. Talking (including noises of all kinds) seemed to be the spontaneous reaction to the stimuli provided and, accompanied by movement, action and experimentation, it seemed to be a prerequisite to production. It was during periods of informal talk that the children's depth of thought and originality appeared to be most clearly conveyed. Spontaneous talk was often untidy yet related to the topic and situation in hand - even determining it. In the light of this apparent need to talk displayed by most of the high I.Q. children, it is recommended that:

- *Teachers make use of the centrality of spontaneous speech, allowing it in a pemissive atmosphere in both group and one-to-one situations.*

- *'Talk' should be allowed to arise naturally from the subject matter in order to:*

    - *allow children to display their range of linguistic ability;*

    - *facilitate learning according to individual's learning styles;*

    - *encourage social interaction;*

    - *elucidate personality;*

    - *uncover problem areas;*

    - *foster the display of thought processes and the imagination.*

More specific recommendations include the following.

- *The use of the tape recorder provides novelty, easy replay or erasure and may proceed from writing, reading or spontaneous speech. It frees the child from the laborious task of formal writing and yet is not as informal as spontaneous talk, being more amenable to correction.*

- *The teaching of planning strategies is necessary for more formal speech or talk in order to avoid the slapdash attitude* *noted in the 'playlets' where little concern for style, content or final effect was noted.*

- *Instruction in the advanced social, intellectual and linguistic skills is required for interactive discussion on moral issues and delicate topics which such children are well able to sustain.*

- *Children behaving as non-communicants or non-participants may need special attention in order to facilitate audibility, increase confidence and improve grammatical structure and usage.*

6.3.4 Reading

Reading ability has been shown to be central to achievement and to scholastic performance. The teachers concerned with the study groups seemed more concerned with mechanical ability and less concerned with reading as a continuous process linked to other cognitive and linguistic skills. They were often unaware of the quality or quantity of the children's private reading. In the high I.Q. study groups, many of the children displayed considerable mechanical and technical excellence yet failed to read with meaning and expression.

Thus it is recommended that the following be considered:

- *Many graded readers have a negative influencing effect on the other language skills, restricting written work to simple, repetitive phrases for example.*

- *Children should be allowed to read widely at their own level with careful monitoring of basic skills.*

- *Teachers should read to children in class often as good models for 'reading for meaning'.*

- *Training in speech and drama may also improve reading aloud to convey meaning and improve the communication of thought and feeling.*

As efficient, quick reading is essential if children with superior intellectual potential are to be able to use the higher cognitive processes on the basis of sufficient data, the following steps are recommended:

- *Such children should all be inspired (or helped with remediation techniques) to become 'real readers', readers who read widely and rapidly and are thus able to see relationships, draw conclusions, inspire their curiosity and imagination and deal with abstract concepts. Reading thus becomes more than a mechanical skill and more than 'reading for meaning' - it may become "creative" in the sense of being interpretive and predictive.*

- *'Real readers' may thus develop a discriminating taste in reading material and, through a study of past and present culture, present the child with patterns of human behaviour applicable to his own life.*

Such recommendations presuppose access to and qualified assistance with extensive reference and source materials - probably larger than a single school can provide. A central resource unit would thus probably be most effective and beneficial.

6.3.5 Writing

Writing is by far the most difficult language mode for it requires a high degree of abstraction and is expanded, deliberate and structured. Most writing in classrooms is further constrained by demands of length, and style rather than being a tool for the expression of personality and other traits. Thus, just as reading has no value for it's own sake, a variety of writing types should be practised for a variety of ends. It is therefore recommended that some of these ends might include:

- *Reporting of independent research.*
- *The integration of various content areas.*
- *Advertising .*
- *Journalism .*
- *Recording of personal interests.*
- *Informal, intimate exchanges.*

In order to achieve maximum benefit from the variety of modes of expression listed above, poor spelling and illegibility should be counteracted with specialist tuition (including a study of etymology and semantics) and a sympathetic response to original content.

7. RECOMMENDATIONS CONCERNING SCHOOL ORGANISATION

Children who enter school possessing superior intellectual potential should increase their deviation from the norm as the years proceed. The variation from the norm should also increase in specific areas - if a child comes to school already reading, for example. Unfortunately such children tend to pace themselves just above the norm or even below it. Thus the following recommendations are designed to assist the rectification of this imbalance:

- *Constant monitoring by means of cross checking and the supplying of records and samples in order to facilitate the judicious timing of:*
    - *bringing the right advice and encouragement to bear on the appropriate moment;*

- *bringing the right pupils and teachers together (or making the teachers and their methods more appropriate).*

Certain organisational procedures may facilitate the above: (and should be explained in detail to parents)

- *Allowing the bright to work together all or part of the time.*
- *Fostering teaching and visiting ties with tertiary institutions.*
- *Acceleration to a higher standard upon due consideration of the degree of intellectual advancement beyond the norm and of emotional stability and maturity.*
- *Partial acceleration in some subjects.*
- *Specialist extra subject provision beyond the usual curriculum.*
- *Weekend and holiday clubs and workshops.*
- *Curriculum enrichment.*

Such provision should include children with superior potential who conceal their gifts, are unmotivated or who underachieve. Beyond any organisational or technical provision the imaginative teacher (or groups of teachers) stands as the ultimate solution. The final set of recommendations in this study concerns teachers and their training, placing the final emphasis boldly and squarely on their shoulders.

8. RECOMMENDATIONS CONCERNING TEACHER TRAINING

As it is clear from the above recommendations that the classroom situation to a large extent determines the nature and quality of a child's performance and may, in fact, initiate or accelerate difficulties, the following recommendations concerning teachers attitudes and skills are of the utmost importance. The recommendations concern both full-time and in-service training facilities and apply to all teachers as well as to (and *especially* to) those who are hand-picked for their lively, intelligent personalities to have special and protracted contact with the 'gifted'. Basically what is needed is *experience* with the gifted themselves, a survey of the relevant literature and contact with specialists in the field in order to avoid ready and easy satisfaction with progress and performance well below par.

Teachers specially assigned to classes or groups of 'gifted' children need certain basic qualities, namely:

- *A vigorous, resourceful, self-confident and enthusiastic approach to life.*
- *Thus enthusiasm for initiating learning and discovery.*
- *They must themselves be open to personal growth and to the needs of others.*
- *A respect for the uniqueness and wide range of the gifted child's capabilities and potential.*
- *Good organising abilities.*
- *Broad background knowledge.*
- *Sound specialist knowledge.*
- *The ability to act as facilitator, questionner and guide rather than as dictator.*
- *The ability to sustain an impartial and permissive yet democratic atmosphere.*
- *Considerable imaginative and creative ability for they must recognise and stimulate it in others.*

More general recommendations aimed at facilitating early identification of the 'gifted' and providing appropriate facilities follow:

- *Checklists of the usual characteristics for identifying the 'gifted' are valuable if accompanied by explanations of individual differences and variations of the complexity of the topic.*

- *There is a need for observation of children in various situations in order to record just how much they can do (in some cases inspite of some weaknesses) and to facilitate the planning, implementation and evaluation of techniques and materials.*

- *Specialist checklists concerning the identification of underachievers,and those who are shy or less demanding, must be provided as reminders that children with superior potential may also be non-readers or slow-readers, have difficulty with writing and spelling, be in need of remedial attention, have difficult parents or be difficult, moody, unpopular and indifferent to work themselves.*

- *Teachers, and those in training, require practice and guidance in the skills they are to encourage in the 'gifted' i.e. logical thinking, critical evaluation, problem-solving and application.*

- *Teachers need to be shown what materials are commercially available, how to catalogue these and thus fill the need and the gaps for individual children by making their own materials with other teachers, specialists, committees, clubs and other professionals. Teachers should be shown how to capitalise on their own special talents and hobbies. Materials thus collected should be available to all schools through a central resource centre.*

- *Teachers should be trained to set realistic goals and expectations with the children and help both child and the parents to do so.*

- *Teachers need to be aware of the complex, interactive nature of influencing factors both on linguistic and scholastic success and thus acquire more positive control (with assistance if necessary) over factors both within and beyond the school.*

- *In order to stimulate the total language environment, teachers must be kept* au fait *with current research and developments in child language, general linguistic research, child development, categories of language and thus the relevant teaching methods and techniques.*

- *Teachers will thus, in agreement with others, and for themselves, be able to reach agreement concerning common and desirable goals in the language skills and arts.*

In concluding these recommendations, the writer would like to state a common yet central fact. That is, that the individual child very seldom remembers a course of instruction or a particular methodology but rather the individual, intelligent and caring teacher who encouraged his or her unique abilities.

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